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THE
INLAND
ARCHITECT AND BUILDER

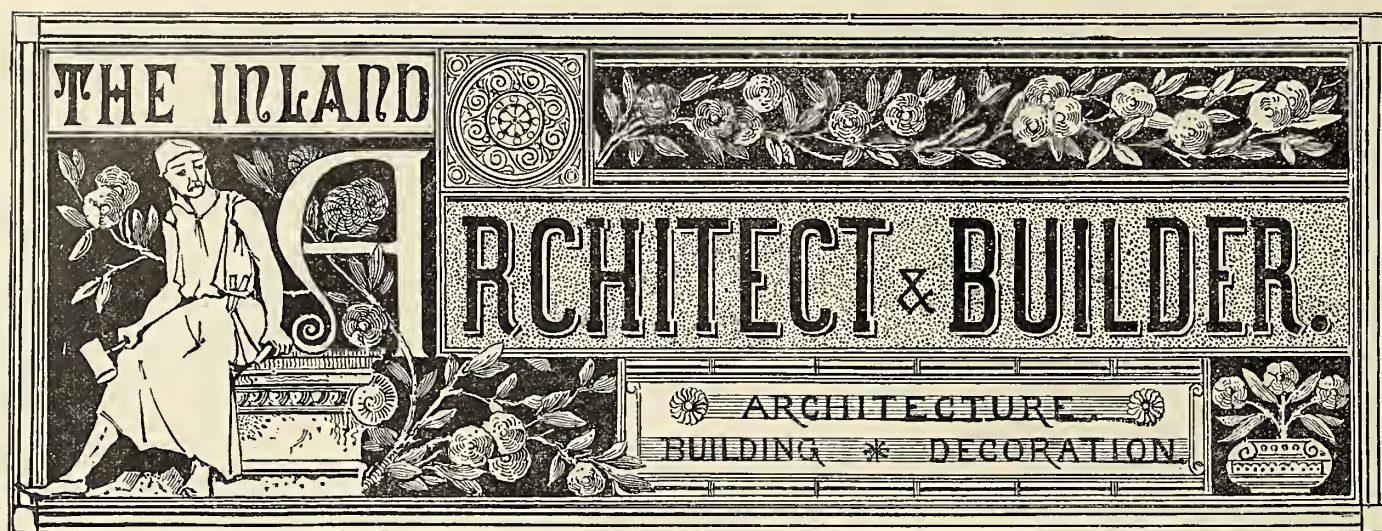
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FEBRUARY 1886 - JANUARY 1887

INLAND PUBLISHING CO.
PUBLISHERS
19 TRIBUNE BUILDING





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THE INLAND ARCHITECT AND BUILDER.

Vol. VII.

No. 1

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THE INLAND ARCHITECT AND BUILDER

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ARCHITECTURE,

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(A NATIONAL ORGANIZATION.)

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L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
C. E. ILLSLEY, Associate Editor.

INDEX for 1885 will accompany the *Intermediate News Number* of this month, which will also give directions for binding THE INLAND ARCHITECT AND BUILDER.

WITH this number the subscription price of THE INLAND ARCHITECT AND BUILDER becomes \$3, which includes the *Intermediate News Number* as announced two months ago.

THE architectural exhibit of the Salmagundi Club, at New York, has, of course, been an object of very considerable interest to architects throughout the country. There has probably been no such general exhibit held in this country before; general in the sense of the widely diverse elements which were represented. It was, therefore, possible for the visitor to form a moderately accurate estimate through the drawings exhibited of the characteristic tendencies of the work now being done in various American and several foreign cities. Speaking broadly, the widest difference between eastern and western work is what we would expect it to be in the quality of finish. Not only did the drawings themselves betray higher culture in both the draughtsman and the designer, but the designs themselves have been considered with greater care and in a more critical spirit. This has, of course, begotten a much more homogeneous grammatical expression and a vastly superior delicacy of rendering, the last quality being noticeable in the drawings as well as in the designs. In these respects the drawings exhibited by eastern architects are very closely allied to their British compeers. The work of western architects, as has been intimated, certainly exhibits haste and crudity, both in design and in the drawings; the designs are generally more or less incoherent; the qualities of refinement and finish are sadly lacking, and the mere grammar of design is often treated with contumely.

YET, in spite of these obvious defects, to a dispassionate critic in much of the western work there is strongly manifested an element of vitality greater upon the average than in the designs exhibited by eastern architects. This, it will readily be seen, is a thing to be expected. The very

crudities are manifestations of a stress of conditions so vigorously operating about the designers that the architect's solution of them is frequently full of a certain vitality and power which in those of the more critical and fastidious eastern architect is frequently somewhat sacrificed. In other words, the solution seems to be very closely connected with the problem, or, if one might so express it, the confluent about it being free as it is from those artificial interventions resulting from greater leisure, less strenuous environment, and possibly less of the cultivation of the schools. Probably something of this essential difference will disappear as the conditions of different parts of the country become more similar. This, again, is to be expected, and yet to those who live in the West it seems probable that similar differences will continue to exist. Architecture, after all, is so widely and immediately influenced as our other departments of creative art, by the conditions and practices of given localities rather than the formulation of schools that it will not be a source of surprise if it is in the West that the American architecture will continue to take upon itself newer and more vital forms, and continue to widen the distance between itself and the traditions of presently accepted architectural practice.

IN its issue of the 30th ult., the *American Architect* publishes an inquiry from architects whose bill for services is disputed, and advises them in reply, to go to their client and show him "the actual amount of time and money expended on the work," etc. While concurring in general with the advice given, we must emphatically demur to the part we have quoted. We think our contemporary has inadvertently nodded, just as Homer is said to do occasionally, by assuming that the value of professional service has any necessary or customary relation with "the actual amount of time and money expended on the work," or by advising an architect to employ such methods of convincing a client. This assumption is false, mischievous and wholly unwarranted; but it is plausible and is a favorite plea with clients and their lawyers when an architect's commission is to be disputed. Unfortunately not a few architects themselves are unable to detect its fallacy and give it a reluctant assent, while inwardly conscious of its unfairness. Therefore we desire always to emphasize in the most unmistakable way the broad truth that in professional service the amount of time spent is no measure of value, but on the contrary the two very generally stand in inverse ratio, i. e., the more quickly the duty is performed the more it is worth.

IF a dentist draws a tooth in a second, or a surgeon deftly performs an operation in a few brief minutes, the patient is not apt to complain of the little time it took. Likewise with artists, sculptors, lawyers and all other professional men; the time spent is apt to be in inverse ratio with the skill of the practitioner, and is something with which the client has no concern whatever. An architect may at one time sketch and erase, sketch and erase for hours over a bit of detail before it will suit him, while at another time a happy thought will occur at the outset and it will be drawn in a few minutes. Very likely the latter design will be more brilliant, less labored than the former which took so much longer. Shall the owner pay less for it because it took so little time to make it? Where superintendence is included in the service there might appear at first to be less objection to estimating the

amount of time given, but even here it is difficult to value an architect's time by the hour. All of this may be avoided by adhering to the schedule of the American Institute and the Western Association. Beside, very few if any architects keep accurate memoranda of the time spent on various jobs, and it would be difficult and troublesome in many ways to do this. Moreover, if it were done and such records were brought into court they would only serve the purposes of a client's attorneys in their scheme of valuing an architect's service by the day and hour just as they would that of a journeyman mechanic or a day laborer.

SOME months ago THE INLAND ARCHITECT created quite a stir among certain of its contemporaries by editorial remarks upon the sometimes questionable advice of enthusiastic sanitarians and sanitary enthusiasts, who, in their haste to add pipe to pipe, and fixture to fixture, appear unmindful of the fact that every new complication not only increases the first cost of plumbing apparatus, but makes it the more difficult to keep in order. In the vast majority of buildings a reasonable cheapness and the utmost simplicity of plumbing are indispensable to its insertion at all. There is a most inviting field now open for sanitary engineers who will apply their talent in this direction. The world needs and must have an arrangement which, with ordinary care, will answer the most essential requirements of hygiene, while combining the merits of the utmost automatic simplicity, and a cheapness which will lead to its general adoption and to its construction of good materials, without scamping, to reduce excessive cost. In harmony with our remarks, we note in Secretary Treherne's annual report to the Architectural Association of Minnesota (see January number of INLAND ARCHITECT), that a special committee appointed to consider the subject of trap ventilation and fresh air inlets to drains, reported adversely to the former, declaring it to be of "only temporary value," and that "systems of plumbing can be so arranged and proportioned as to do away with such special ventilation by comparatively simple precautions," etc. The arguments for and against trap ventilation need not here be considered. It must suffice to remark, in general, that the conditions which obtain in experimental plumbing apparatus with clean water, clean pipes and new fixtures, may differ in important regards from those apt to exist in actual experience, and, in particular, that trap ventilation has never obtained more than a limited employment among practical constructors, partly because of its cost, no doubt, partly from a mistrust of its real utility, and partly because there was no convenient method of testing its operation after it was put in.

A PRINTED circular has been received from the Boss Stone Masons' Association, of St. Louis, stating that that body has "unanimously resolved that in future no lump bids shall be given, but all work should be accepted only per perch. This resolution shall be in force from and after February 1, 1886." The syntax, as well as the sentiment, is original with the boss stone masons. In St. Louis the custom largely obtains of giving the whole contract for a house to one party, generally a carpenter, who engages to build it, "according to plans and specifications" for a stated sum. This is called a lump bid. The building contractor in turn seeks from the masons, brick layers, plasterers and other tradesmen lump bids for their respective portions. With the more competent "bosses" this arrangement works well enough, but not all who aspire to do business as masonry contractors are able to take off the quantities correctly from a set of plans. Such parties are, therefore, exposed to risks which they would avoid if the responsibility of estimating

were assumed by someone else and they were only required to name a price per perch. This class of contractors would seem, from the above resolution, to control the St. Louis Stone Masons' Association.

WERE mechanics more disposed soberly to consider in advance the probable results of a line of policy, their votes and "unanimous resolves" would carry more weight than they do. If an attempt is made to carry out this resolution of the St. Louis boss masons it is likely to prove an afflicting apple of discord in their association. Prohibited from making lump bids the only chance for a discrimination among bidders will be in the price per perch, and the consequence will be reckless undercutting, in spite of all the efforts of the association to sustain uniform rates. Farther, could the rates and the resolution be equally maintained, there would be no occasion for bidding at all since every man's figure would be the same. In that case the leading masons would get nearly all the work, there being so much less risk in dealing with them and no pecuniary inducement to employ inferior men. For these and other reasons, therefore, this resolution seems likely to encounter the fate of similar attempts in the past, unanimously adopted only to be as unanimously forgotten when actual competition for work opens in the spring.

A PRINTED circular has been received from A. & B., stone carvers, who desire, properly enough, to inform "friends and patrons" that they have formed a partnership for the transaction of business, and will take special care, etc., with work intrusted to them. But, most unfortunately for their purpose, to secure the good will of architects, they add an offer to "allow—per cent to architects for all work direct from their offices under competitive bids." As these are evidently novices in dealing with architects and have, no doubt, sinned unwittingly, we refrain from holding them up to public opprobrium by printing their names, as we should be very apt to do under other circumstances. But the occasion is a good one for admonishing these parties, and all others, that the taking of commissions by an architect from a contractor, material man or from any other person interested in a building beside its owner, is an act of a gross professional misconduct substantially on a par with embezzlement.

THE making of such offers as this to an architect is, therefore, in effect as insulting as would be a proposition that he should rob his client outright. An architect is not a solicitor who may be engaged to introduce this or that specialty to favor this or that contractor on any ground except intrinsic merit. On the contrary, his position is that of an expert, confidential adviser, who devotes his professional knowledge and skill exclusively to the benefit of his client. In every case his recommendation of this or that apparatus, or of this or that workman, will depend solely upon the question which is best for the owner in each particular instance. An honest architect selects in every case what he considers best for the owner on its merits alone. He wants no commission from makers or dealers to influence his decision, and anyone who comes with such an offer simply exposes himself to being metaphorically if not actually kicked out.

THE city of East Saginaw, Michigan, wants a new city hall, to cost one hundred thousand dollars, and being plainly mistrustful of the ability of any single architect to plan a building of such unusual size and importance, it must have the benefit of a combination of talent and calls for a competition. Five architects will be invited to wrestle with

this problem, one of whom is to be awarded the work at the usual commission, which looks fair enough, and the four others are to sell, grant and convey their plans in toto to the committee for just one hundred dollars each, an arrangement which is expected to stimulate each architect to the utmost pitch of exertion lest he should be one of the four. The natural elation of the successful architect, however, will be somewhat chilled by a requirement for him to give bond that the plans, specifications, etc., shall be faultless and that he shall pay the cost of any extra work himself. Unfortunately, there is no reason to doubt that the city of East Saginaw or any other city, town or village in Michigan, or anywhere else, can easily find architects enough to accept terms as ignominious as these or worse. The demoralization which the practice of competition has wrought and daily perpetuates in this profession has been equally destructive to enlightened self-interest and self-respect.

BUT after all the most interested party is not the architects, who are concerned only to the extent of a five per cent commission, but the city of East Saginaw, which is to put up the one hundred thousand dollars. The first question, therefore, should be whether it is likely to get as much for its money through competition as if it were to select a responsible architect at the start and place the whole thing in his charge, just as people do with lawyers or doctors. This is the regular way of dealing with professional men; no sane man would think of any other in law or medicine, and a little inquiry will show that it has been as generally satisfactory in architecture, while competitions rarely fail to disappoint their promoters. How do the East Saginaw commissioners expect to decide which is the best plan? Are they experts in architecture and able to discriminate in technical matters of construction, strength of materials, architectural proportion, appropriateness of design, etc.? Can they judge from the plans how adequately or inadequately the various parts of a building will be lighted, heated and ventilated? Can they correctly conceive from the geometrical drawings just how the building will look when erected, the varying projections and recesses, or will they depend wholly upon the caprice of the artist who furnishes the perspective?

THEN how will they judge of the relative cost of the different designs? In short, what grounds have they for any assurance that, after poring over the five sets of plans, elevations, sections, perspectives and specifications till their eyes are dim, they will not finally adopt the very one which, could they correctly foresee the effect of the building when erected, they would unanimously reject as the most ill arranged, extravagant and unsightly of all. Possibly they may be discreet enough to call in an expert, but if his advice is to be depended on he must be of sufficient ability to design a suitable city hall himself, and must be adequately paid for his services. To his fee will be added the four hundred dollars which are to compensate the luckless "other four" for their designs and the five per cent commission to the fifth architect, who by agreement is to be chosen on the merits of his plan alone, although, individually, he may be the very one of the five who has least experience in such work and would be the last choice of every one of the committee. When now we consider that all of these risks might have been saved, together with the four hundred dollars, and the fee to the expert for his indispensable advice, by engaging a responsible architect at the start, and getting the benefit of his counsel at every step, the question irresistibly arises whether, in resorting to a competition, the East Saginaw commissioners have not chosen the most hazardous and the most expensive method of select-

ing an architect for their new city hall. It would be cheaper and probably quite as satisfactory in the end to put the five names in a box, shake them up and then choose the one which drops out first.

Style in Architecture.*

BY W. A. HAWLEY, ARCHITECT, OF MARSHALLTOWN, IOWA.

WE often hear foreigners, or those with foreign sympathies, complain of American architecture as devoid of any purity of style; consisting of a strange conglomeration of details and features from various styles, so cemented together as to form a composition utterly unworthy to endure.

Another complaint is that the various styles of architecture are so used by different designers that there is no telling from the style, or even in some cases, from exterior form and arrangement, what use was intended for buildings; nor yet any style which can be called distinctively American.

However the implicit conclusions in these criticisms may be viewed, we must admit the correctness of the premises; that is the variety of styles in designs for similar uses, and the existence of heterogeneous designs, which, borrowing from several, can still be classed under none of the existing styles of architecture.

Even further than this, we must admit that, here, as elsewhere, there have been many buildings erected which have proved far from satisfactory to owners and public, and not a few which have also been sadly disappointing to their designers.

Still the question is, in view of all this, are we prepared to select one of the existing styles as our principal or exclusive style, or, failing in that, shall we set ourselves conscientiously to work to develop a new American style? In short, are we prepared to expend our chief efforts upon elaborating the form of expression rather than the idea sought to be expressed?

Would it not be equally wise for us, discarding that accumulation, from various sources, of idea vehicles, known as the English language, to attempt the immediate construction or evolution of an American language?

To my apprehension the styles of architecture, like the languages which are used to describe them, have come into existence, not like Minerva, full grown and ready armed, but by degrees, as the repeated impression of one and another recognized need upon the creative intellects of a people have at last caused the invention and improvement of a means to meet each such need, so perfect that no material improvement could be thought of.

Each of these succeeding forms, gaining popular approval, came to be a part of the common means of meeting needs or expressing ideas. But it was only when some one came to study these forms from the outside, to analyze, compare and collate them, that they were recognized as parts of a style or language.

Not only so, but this recognition as part of a style has, not infrequently, proved a sort of fossilizing influence; preserving the form with marvelous fidelity, it may be, but forever destroying the life which produced it and of which it was a manifestation.

As with language, so with architecture, forms of expression have been borrowed with greater, less, or with even no change when they seemed fitted in some degree to meet the requirements of another people than their originators.

Thus the Greeks borrowed from Egypt, the Romans from Greece, and so on, till today we have all these accumulations from which to select that best suited to our needs, if we cannot or do not choose to present new solutions of the problems set before us.

So in examining any or all of the known styles of architecture, which are really but the crystallized rules for meeting their necessities, constructive, utilitarian and decorative, which were used by a given people within certain limits of time, we find that each one started with material borrowed from an earlier style, and grew, both by original invention and by additions from other styles, modified as the variations of need dictated.

In the "Habitations of Man In All Ages," Viollet-Leduc traces, in a brief way, the story of domestic architectural development, as Fergusson deals with the more monumental parts of the same in his "History of Architecture."

By a careful study of either one, we may see that, so long as careful adaptation of buildings to their uses was the chief aim, the style used continued to improve, but, whenever the form became of such importance that fixed rules for its proportions and arrangements came to be generally observed the style entered upon its period of decay, even though there were still many erections showing daring and skill in designing and, often, a remarkable degree of manual skill on the part of the artisans.

May we not, then, safely conclude that the great reason why no style has come to meet our needs, so as to possess the field, is that we have been too closely bound by the rules of previous examples, instead of seeking with judgment and care to modify where needs have changed and to create where needs are quite new?

But, if too close and servile, a following of precedent is a flight upon the growth of architecture, a conscious struggle for novelty merely as novelty is equally to be avoided.

There are so many variations in the conditions which are imposed, even where at first the problems would seem almost identical that a careful study of the requirements, including not only the uses of the building, but available materials, cost, etc., as well, will give ample opportunity for variety without making that the chief object sought, regardless of, or at least, at the expense of good construction, use, durability and economy.

In short, it matters not what we suffer to assume first place in our designs, if we relegate fitness for use, site and amount of expenditure to a second place we cannot hope to build for the coming American style, or even to our own or our clients' enduring satisfaction.

* Paper read before the Third Semi-Annual Convention of the State Architectural Association of Iowa, January 13, 1886.

Owners' Influence on Architects.*

BY T. R. TINSLEY, ARCHITECT, KANSAS CITY, MISSOURI.

AT Delphi, in ancient Greece, about 2,500 years ago, two Greek brothers, Agamédes and Trophonius, formed a firm of practicing architects. They were the sons of a king; but, prouder boast than that conferred by the accident of royal blood, and the honors incident thereto, these architects commanded fame and exalted distinction by reason of being the authors of those magnificent examples of the mother art, the Temples of Apollo, at Delphi, and Neptune, at Mantinea.

The simple fact that their minds were the womb wherein was conceived and from whence sprung the design of the Temple of Apollo made them celebrated men and architects; this glory was sufficient; but to it was added the fame they were destined to eternally gather by their names drifting down the current of history as the architects of a temple the adytum of which stood in the midst of the earth, and the navel of the world was shown on the shrine thereof. Pause and consider what a God-given opportunity for the vaulting ambition of a pagan architect it was to design a building that stood as a monument over the umbilicus of the universe. Christianized architects of today may sneer at this conceit, and in it but recognize the juggling of pagan priestcraft; but who can doubt the sincerity and honesty of awe which these Grecians, existing six hundred years before the advent of Christianity, held the utterings of these oracles? Were they not as sacred to them as the New Testament is to the Christians of today? and if not, why not?

Let us now endeavor to analyze the peculiarities of a human mind that had been trained superfine enough to be the alembic through which was distilled the genius that conceived these splendid structures, the Temples of Apollo and Neptune, and that it was a human possibility to pass through the self-same alembic, and to be offspring of the self-same genius, the degrading and corrupt scheme of robbery, grand larceny and self-prostitution that these two master architects were guilty of toward Hiero, who employed them to construct a building suitable for the safe keeping of his immense treasures, at the same time confiding in them the extent and nature of his wealth; and that these two eminent architects deliberately, premeditatedly, and with design aforethought, most cunningly had adjusted certain stones in the wall of this treasury in such a manner that they could be easily withdrawn and reinserted, thus giving them secret entry into the treasury to purloin therefrom; and it appears that they daily took advantage of this, as Hiero with dismay discovered, notwithstanding the great care and cost he had been to in employing exalted talent, in the designing and construction of his treasury, that yet there was a mysterious leak, which baffled detection; so at length he set a trap, much, I imagine, like a farmer's scheme to catch a chicken thief; and the trap, in this case, did its duty, for it is related that the two thieves, having entered the vaults, Agamédes thrust his hand into a money chest, and was instantly fixed by Hiero's snare.

Trophonius, after effort, despairing of releasing him, and to save himself from disgrace, cut off Agamédes' head, stripped him of his clothing, so as to destroy all attempt at detection, and while endeavoring to escape, was himself destroyed, and thus perished two competent and capable architects.

Now, fellow architects, there is a moral in this tale, and I have related it for that moral, and not for an idle or passing fancy. In my official capacity as head of the department of buildings for Kansas City, I find that some of our architects are robbing their clients of the capital they have invested in their building, and are robbing the innocent parties who may have rented or leased the building, and are robbing themselves of their architectural existence, and their profession of its rightful dignity and standing. And how are they doing this? Not by cunningly adjusting certain stones in the walls in such a manner that they could be easily withdrawn; but by assenting to foundation walls to be constructed in such a manner and of such character, and upon such earth foundation, as in their judgment is inadequate and insufficient. This evil is done by giving ear to the owners' cry of "too much money being sunk in the foundations," or by permitting the owner to influence him by hinting "that if these foundations are going to cost so much, I will either not build at all, or must look about for a more economical architect;" or by submitting to the owner consulting some civil engineer or builder, and upon their irresponsible opinion, directing the architect "that it is not necessary to incur the expense of his plans about the foundation, as Smith and Brown say it is all right, and he is willing to risk it."

I contend that any architect that thus permits his judgment to be set aside, and gives free or sullen consent to the going in of a wall that has been dictated against his opinion, is not less guilty of robbery than these pagan Greeks were. There are buildings that my official attention has been called to as settling, cracking and becoming dangerous, and when I quietly approached the architect of the building about its condition, he has peevishly informed me that it was not his fault, as the owner had ordered the excavators to cease and the stonemasons to commence, directly against the protests of the architect.

Now, permit me to add a pertinent remark right here. In every case where an owner has thus interfered he has openly boasted of his action, and taken pains to call attention to the fact of his superior common sense over professional knowledge, and pointed out the amount of money he saved, and this boasting continues as long as the building remains in *status quo*. But when it once commences to show the inevitable, to lean, to bulge, to fracture, and its condition becomes street scandal, then it is that the owner forgets his interference, and his boasting is transferred to indignant denouncing the architect "for not having gone to solid earth, cost what it may, as a fool would know that it was economy in the end; and what did he employ an architect for and trust everything to him, as, of course, he (the owner) was not expected to know anything about building." And then this owner, who imagines that he has been injured, and his friends follow up and use all their influence to break down the architect's practice.

Now, I have no sympathy for either, and contempt for both; my expe-

rience as an official has convinced me that in the majority of cases of official notices being served by the building department upon owners whose buildings have developed defects, which, if neglected or ignored, will surely result in rendering the building dangerous to life or limb, consequently subject to municipal condemnation, that the owners, in response to the official notice gives freer expression to his feelings to the department than he does to his architect, and yet I have to find a single case where the owner has failed to lay the blame on the architect, his interference to the contrary notwithstanding.

I believe that I am correct when I assert that any architect who will knowingly permit his judgment to be overruled or set aside as to the proper firmness of earth bottom, or as to the character or manner of the introduction and use of artificial substitutes for base resistances, such as piles, rafts, greeleyings, etc., or as to the thicknesses, depths and quality of masonry of walls, compositions and applications of mortars, cements or concretes, I assert that such an architect is both dishonest and cowardly, first, to himself; second, to his profession; third to his client, and fourth, to the community. And it were better for him that he build honest and strong, and leave certain stones whereby he may steal in and rob only filthy lucre, than that he run the risk of not only robbing the client, the occupant, himself, and the community, but that also he may take that which no man can replace, human life.

There exists no excuse for this manner of doing business. The architect can and should utterly refuse to be a party to such suicidal proceedings, and if the owners persist, he should report the matter to the proper authorities.

Course of Study for Junior Members.*

BY MYRON S. CHURCH, OF CHICAGO.

BY referring to sections 1 and 2 of article VI. of the constitution, it is seen that any person having served one year in an architect's office or in kindred arts, is eligible for junior membership, and any person having served three years in an architect's office or in kindred arts, is eligible for senior membership; thus limiting the junior members to those serving their second and third year in an office, but thinking that the purposes for which this club was formed, and for which these papers are read, would be more nearly subserved by widening this field, I take upon myself the liberty of including the younger senior members within the pale of these remarks, hoping thereby that if there be within our ranks any person serving his fifth or sixth year at pure tracing, to point out to him the road that would lead to a commutation of sentence, and possibly save him from a life term at solitary tracing, while to those who have not had the time to be guilty of the crime of indolence, it may serve as an additional finger-post pointing out the road to success, if not to a realization of all their waking dreams.

This guide board would read, "Observation and Study," and by these alone can any degree of proficiency be attained, or success expected. Observation first, for knowledge acquired thus is knowledge gained direct, and the observer takes more delight in this self-acquirement, and will retain the matter longer in his memory, than by its acquirement indirectly through the medium of books, by reflection.

Books are to culture what drawings are to a building, mere tools, means to an end, not the end itself, and their virtue is apt to be overrated even in those branches of study where their use seems to be most needed.

All observation must be accurate and classified; he that looks at everything sees nothing; know not only that things are thus and so, but know the reason for their being so, for instance, you may be shown the plan of a large building, possibly the basement plan, now you may be interested about this time in some one subject that this plan will answer your inquiries, it may be about boilers, examine their arrangement, their size and style, their location in the building, their relation to each other, and see the reason for their being placed so, see how the smoke is carried from them to the chimney, note how the latter is constructed to best serve its purpose, have a note book continually with you, and if a question presents itself to you that cannot be answered, at once make a note of it, and in your leisure moments call in those useful helps to knowledge, books; ask questions, don't be afraid to say you don't know if you don't; you will be obliged to say it only once, I hope, about the same subject. Don't fail, when the opportunity presents itself, to visit a building where you can see the practical workings of the items under inquiry, and this course pursued for the period of one year will lead to a fund of useful information that will surprise the least zealous worker, and which once acquired in this manner, will hardly be forgotten, and opportunities will be found for their practical application, bearing in mind that no important work will be intrusted to you the second time if not neatly and intelligently done the first.

As to a course of systematic study, the nearer one comes to that pursued in the different industrial universities, the greater will be the benefits derived, and those who, from force of circumstances, cannot avail themselves of this golden opportunity to acquire a combined theoretical and practical education, made possible only within the last fifteen years, must follow the example set by them, arrange your own course and so divide up your time that in the following year you will know just what you are going to study, and for what purpose and at what time.

The requirements for admission to the different universities are about the same, take that for the Massachusetts Institute of Technology. The applicant must have attained the age of sixteen years, and must pass a satisfactory examination in arithmetic, algebra, plane geometry, French, English grammar and composition, history and literature and geography.

Cornell leaves out history and literature and substitutes physiology as presented in the smaller text books, while the Industrial University at Champagne omits French and adds physiology, botany and natural philosophy.

A university is a collection of colleges, and the colleges are again divided into schools; thus at Champagne we have the college of engineering, which embraces the school of architecture, the school of mechanical engineering and the school of civil and mining engineering.

* Paper read before the second annual convention of the Missouri State Association of Architects, at Kansas City, January 12, 1886.

* Paper read before the Chicago Architectural Sketch Club January 18, 1886.

It is designed to teach only the higher branches of education at the universities, and not for the study of the common branches, such as arithmetic, geography, English grammar, reading and spelling; you are expected to be proficient in these before entering, so the first or preliminary year is really only laying the foundation for the three succeeding years, and the course of study during that year is the same for all the colleges, whether one takes the engineering or architectural course.

The course after entering includes the following studies: Mathematics, including analytical geometry and a taste of the calculus.

A thorough course of drawing, linear and freehand, sketching, and the use of water-colors.

In physics, experimental mechanics, heat, light, electricity, magnetism, acoustics and optics.

In mechanics, the strength of materials, graphical and analytical analysis, trusses, arches, piers, etc.

The history and distinguishing features and characteristics of different styles of architecture, Egyptian, Greek, Roman, Byzantine, Romanesque, Gothic, Renaissance and Modern.

In chemistry, lectures and laboratory practice, building materials and construction, continuous study in the theory and practice of design.

The student also takes up French or German, and in the senior year, contracts, agreements and specifications are discussed. This course leads to the degree of Bachelor of Architecture.

For students who cannot take the whole course of four years, a special course of two years is arranged, but leads to no degree, and is as follows:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

SCHEDULE OF PARTIAL COURSE IN ARCHITECTURE.

FIRST YEAR.

First Term.

The Five Orders.
Sketching and Water-Color.
Mechanical and Freehand Drawing.
Materials.
Ancient Architectural History.
Elementary Mechanics.

Second Term.

Original Design.
Sketching and Water-Color.
Common Constructions.
Projections.
Shades, Shadows and Perspective.
Medieval and Modern Architectural History
Graphical Statics.

SECOND YEAR.

First Term.

Original Design.
Sketching and Water-Color.
Specifications.
Ornament and Decoration.
Problems in Construction.
Ventilation and Heating.
Working Drawings and Framing.

Second Term.

Original Design.
Specifications and Contracts.
Planning.
Iron Construction,
Schools, Theaters, Churches.
Acoustics.
Surveying.
Problems in Construction.

From this I should select, as being that which you would not be apt to learn in an office, and which would be of the most benefit to you, the following studies, which you can all learn yourselves, and be able to apply them in practice: materials, elementary mechanics, graphical statics, iron construction, problems in construction, history, which would include the Five Orders.

Examples might be cited of different successful architects who never studied chemistry and physics, who never saw the inside of a college. In fact, I knew an architect who could not do long division, yet succeeded in making a good living, so far as money was concerned, notwithstanding his inability to master higher mathematics. On the same plane with him is the architect who confidentially told his friend, on hearing of an event that transpired the day before in London, not to believe in such a thing as the Atlantic cable, as it was nothing but a grand American humbug, and thus it is a great many go on making mistakes, may be not so palpable as these, just through the want of "observation and study."

Chicago Builders and Traders' Exchange.

THE members of the Builders and Traders' Exchange of Chicago banquetted at the Grand Pacific Hotel on the 4th instant. The occasion, besides being exceedingly enjoyable, was graced by many guests, principally from among the leading architects, and the admirable choice of speakers brought forth much that was extremely practical as well as amusing. A brief extract of the speeches is all that can be made in this issue, except that of Mr. Geo. C. Prussing, president of the exchange, which is of such general interest as to partake of the nature of a report, as it certainly outlines the programme of the exchange for the coming year. Mr. Prussing made a very acceptable toastmaster, and opened the season of speeches by introducing that Nestor of the architectural and building profession, Chicago's first architect, Mr. J. M. Van Osdel.

Mr. Van Osdel spoke briefly on "Chicago before the war." The speaker spoke of early life, he had witnessed the battle of Fort Henry, and for fifty years had followed his calling. He stated that his early Chicago experiences were fully set forth in a series of articles contributed to THE INLAND ARCHITECT of 1883.

Mr. Van Osdel's remarks were listened to with the greatest deference by those assembled, the chairman then introducing Architect W. W. Boyington as an architect of long and honored practice.

Mr. Boyington said the architect and contractor were equally responsible to the owner, but that he must be architect and superintendent of work in his charge. That he must see that material be of good quality and pass upon the perfect completion of the work. It was also necessary that he be fully informed upon all the arts and sciences connected with building.

The chairman then announced: Lumber, gentlemen, I suppose you all know what lumber is, but none so well as Mr. J. H. Swan, the president of the Lumberman's Exchange, who will unload.

Mr. Swan said the matter of lumber has a history identical with that of the city, and gave figures which showed that the receipts of lumber in 1858, beyond which he had no data, were 311,000 feet, but that in 1852 the shipments were 70,740 feet. The shipments in 1872 were 417,827 feet. The maximum of the lumber trade to date was reached in 1882, when the shipments were 2,116,000,000 feet. The receipts in 1885 were

1,740,000,000 feet, and the shipments 1,970,000,000 feet. Mr. Swan gave further interesting data and account of the early days and the progress of the lumber trade.

The chair announced Architect W. L. B. Jenney, foreign secretary of the American Institute and Western Association of Architects.

Mr. Jenney, commencing with an apt quotation from Miles O'Riley, after which pleasantness, he sketched the history of the trade guilds during the middle ages. Today we see a revival of the guild, the unworthy weeded out and a high standard introduced. The speech was full of information and bright wit.

Mr. D. V. Purrington being introduced spoke of "Clay," the vast length, breadth and depth of the subject, but having its qualities in the composition of brick, spoke facetiously of its use in mud pies and clay pipes for blowing soap bubbles, and its fascination for youth in the shape of marbles, and its ancient province in the Hub district as a receptacle for beans.

Masonry was the subject of an interesting speech by George K. Fox, followed by Carpentry by Wm. Grace, in which each being recognized experts, the proper methods, the abuses and the privileges of their respective crafts were cleverly and entertainingly told.

Architect D. H. Burnham, in response to the toast "The Successful Builder," spoke of the need for creditable builders, and said it was a common remark that if architects would invariably employ the best builders and would rigidly exact from them perfect work there would be no poor contractors. He spoke in favor of owners giving the architect entire authority and allowing him to engage a workman because he was the best and not the cheapest. The successful builder was a man of truth in his character as well as in his life; a man of knowledge, and preëminently a man of energy. The architect never has to read over his bill of expenditures; they are allowed and paid.

The chair announced the abused plumber, and he appeared in the person of Alex. W. Murray, who spoke feelingly in rhyme upon his woes, but before his speech ended there was strong evidence that the plumber was a valuable craftsman and reasonably well paid.

Robert Clark was to have spoken as an "Ironmonger," but was absent.

The chairman announced "The Press, a substantial structure erected upon a firm foundation by master builders, and the response came in a gracefully worded and delivered speech by Mr. James C. Beeks, of the Chicago Times.

As some reference had been made in other speeches to the "official organ," the chairman announced that THE INLAND ARCHITECT AND BUILDER was the official journal of the Builders' and Traders' Exchange, and as its managing editor was present would call for a response to the toast.

In reply, Mr. McLean said that any editor spoke best through type; called attention to the need for schools for mechanical training, and of the marked advance in this particular from the kindergarten upward to the manual training schools of the country. The present generation should do something to produce good mechanics or the next would suffer.

The chairman, Mr. Geo. C. Prussing, made the final speech as follows, which was listened to by the entire assembly with marked attention:

And now, Gentlemen, before closing, it may not be out of place to say a word or two about the Builders & Traders' Exchange. You know its objects. The management desire it understood that, while satisfied with the progress made in the past, it will not rest or be content until it has succeeded in making the Exchange the headquarters of all builders, meaning thereby all who furnish any article or branch of labor required in the construction of buildings, and of all associations of builders. This it has not yet become. Various branches of trade have not as yet recognized the common advantages of mutual association and cooperation. While during the first stages of organization it was impossible to do more than to provide Exchange Rooms proper for the more speedy transaction of business with fellow mechanics or dealers in materials, other departments were added as their need became apparent and our abilities permitted. The Credit and Collection Department is of benefit to all. Disputes among members and among members and others can be, and are, referred to the Arbitration Committee for adjustment, thereby saving the laws delays and expense.

The foundation for a library of books of reference has been laid. We have now on our shelves 400 volumes, all on trade subjects, architecture, and applied science generally. At the last annual, \$1,000 more were appropriated for its enlargement—a library cannot be found ready made. It is of necessity of slow growth, but with the liberal annual appropriations from the Association's surplus funds, and the kind donation of books from members, we may safely count upon possessing the most complete library of its kind in the West at an early day. Every year the Exchange publishes its "Hand Book" filled with useful information for all. Its next issue will be enriched by a catalogue of the library. Its volumes may be consulted at the Exchange Rooms at any time, and all, with the exception of a few rare works, may be taken home for study.

The perplexing provisions of our lien law have lately been considered. Action for its radical amendment or repeal seems imperative. All engaged in building are mutually interested herein. A series of public evening meetings will be held at the Exchange to agitate the question and take steps necessary to formulate our own position clearly—to enlist cooperation throughout the state, and make the law what it was designed to be, a protection to the honest mechanic and manufacturer of building materials.

For years it has been clear to the directors of the Exchange that the establishment of a public exhibit of building materials and appliances under its auspices and management will be needed to afford its members an opportunity to display their goods to customers and architects. For various reasons its establishment has been postponed until this spring. At the last meeting of the Board of Directors a committee was appointed to report ways and means for the early opening of such exhibit under the same roof and management with the Builders' Exchange. And right here let me say that while no one can have a more thorough appreciation of the future greatness of our city, still I am of opinion that even if we should live to see it teeming with millions of busy inhabitants, it will not be large enough for two "Builders' Headquarters." There can be but one, and we believe the present organization will be that one. Whenever our present quarters, meaning thereby, the building in which the Exchange is now located, containing six floors of 80 by 120 feet each, lighted on both sides and from the center (for there is no reason why we should not occupy the entire building in time, subdivided in any manner found suitable for our purposes), whenever, I say, we shall have outgrown our present quarters, or for any other reason they shall have become unsuitable, the Exchange will, we trust, have become strong enough and the necessary business talent will be found, to erect a building, bearing above its portals, in capital letters, carved deeply into lasting rock, "The Builders & Traders' Exchange of Chicago."

Subsequent conversation with the officers of the exchange indicated a strong movement toward carrying out the plans outlined in Mr. Prussing's speech, and the large attendance of leading architects was spoken of as an indication of the increased interest of the more prominent members of the profession in the upbuilding of the grand building center, toward which the best efforts of Mr. Prussing and his associates are directed. The tables were handsomely appointed, and the viands arranged in Mr. Drake's best style all voting this, the first banquet of the Chicago Builders' Exchange, a decided success.

The Kansas State Architectural Convention.

PURSUANT to a call the architects of Kansas met at the parlors of the Windsor hotel January 25, 1886. The meeting was called to order at 4 P.M., by Mr. J. G. Haskell, who was appointed November 20, 1885 by the Western Association of Architects as committee for Kansas, to call the architects of Kansas together with a view of forming a state association. Mr. J. G. Haskell, of Topeka, was chosen president and Mr. F. J. Grodavent, of Leavenworth, was chosen secretary pro tem.

A committee of five, E. T. Carr, Alfred Meier, C. W. Squires, S. A. Cook and C. B. Hopkins, were appointed a committee to draft constitution and by-laws.

A call of the roll showed the following gentlemen present:

J. G. Haskell, of Topeka.	Otto A. Weile, of Winfield.
L. M. Wood, of Topeka.	S. A. Cook, of Winfield.
Geo. Ropes, of Topeka.	A. B. Howatt, of Hutchinson.
W. R. Parsons, of Topeka.	Alfred Meier, of Atchison.
C. H. Parsons, of Topeka.	C. W. Squires, of Emporia.
C. B. Hopkins, of Topeka.	E. T. Carr, of Leavenworth.
J. C. Holland, of Topeka.	F. J. Grodavent, of Leavenworth.
H. M. Hadley, of Topeka.	C. J. Jobson, of Leavenworth.
W. A. Ritchie, of Winfield.	B. F. Erwin, of Parsons.

The following names were submitted for membership:

E. Dumont, of Wichita.	W. T. Proudfoot, of Topeka.
C. W. Terry, of Wichita.	F. W. Cooper, of Topeka.
C. W. Kellogg, of Wichita.	John Barton, of Independence.
G. W. Bird, of Wichita.	Geo. P. Washburn, of Ottawa.

The meeting was adjourned to 7:30 P.M.

EVENING SESSION.

The convention convened at 7:30 P.M., pursuant to adjournment, Mr. J. G. Haskell in the chair.

The report of the committee on constitution and by-laws was received. The constitution which was then taken up, considered by sections, and adopted, reads as follows:

CONSTITUTION.

SECTION 1.—*Name*.—The name of this association shall be the "Kansas State Association of Architects."

SEC. 2.—*Objects*.—The objects of this association shall be to unite all, directly or indirectly, interested in architecture, in efforts, to promote the artistic, scientific and practical efficiency of the profession to encourage the study of kindred arts, and to correct unprofessional practices.

SEC. 3.—*Members*.—This association shall consist of fellows, juniors and honorary members. Any architect in the state, who may have engaged in the honorable and exclusive practice of his profession for one year, shall be eligible to election as follows. Any student or draughtsman, who has spent at least two years in the service of a regular architect, or in an approved architectural school, may be eligible to election as junior.

Juniors shall have all privileges except those of voting and holding office. Artists and engineers, who manifest an interest in the objects of this association, shall be eligible to election as honorary members, and enjoy the same privileges as junior member.

SEC. 4.—*Officers*.—The officers of this association shall be a president, a vice-president, a secretary, a treasurer and three trustees, who, with the above officers shall constitute an executive committee. The president shall be ex-officio chairman of the executive committee.

SEC. 5.—*Duties of Officers*.—The president, or in his absence, the vice-president, shall preside at all meetings of the association, and in the absence of both of these, a presiding officer shall be chosen by those present. The secretary shall take the minutes of all proceedings of the association, and conduct the correspondence.

The treasurer shall collect all funds of the association and disburse the same on the order of the secretary, countersigned by the president; but they shall not involve the association in debt. Both the secretary and treasurer shall make a written report of all matter in their charge, at each regular meeting.

The executive committee shall control the property and general interest of the association; shall receive and act upon nominations for membership; receive complaints; give written admonition to any member whose conduct may appear to them to be injurious to the interests of the association, or contrary to its by-laws, and if in their opinion the nature of the offense requires it, may request him to resign; expel members of the association for cause; call all extra meetings; act as a committee of arbitration on all questions submitted to it by members of the association, and generally shall control its welfare and interests; they shall keep a record of all their proceedings, and report the same at each regular meeting.

Five members of this committee shall constitute a quorum, but a smaller number may adjourn from time to time.

SEC. 6.—*Appeals*.—All appeals from the action of the executive committee shall be: First. To the state association in regular assembly. Second, appeal may be had to the Board of Directors of the Western Association of Architects, whose decision shall be final.

SEC. 7.—*Amendments*.—This constitution may be amended by a two-thirds vote of the fellows present at any meeting of the association, provided that a notice of such proposed change shall have been mailed to each fellow by the secretary thirty days before date of such meeting.

Mr. Washburn: I make a motion that the chairman appoint a committee of five to nominate permanent officers.

Mr. Wood: And carried.

The chairman appointed the following as a committee to nominate permanent officers: C. H. Parsons, George Ropes, H. M. Hadley, A. B. Howatt and W. H. Ritchie. A recess of twenty minutes was then taken.

After recess C. H. Parsons, chairman of the Committee on Permanent Officers, reported as follows:

For president, J. G. Haskell, of Topeka.

For vice-president, George Ropes, of Topeka.

For secretary, H. M. Hadley, of Topeka.

For treasurer, E. T. Carr, of Leavenworth.

Trustees, Alfred Meier, of Atchison, C. B. Hopkins, of Topeka, S. A. Cook, of Winfield.

Mr. Carr: I move that we elect the permanent officers by ballot.

Mr. Hopkins seconded the motion.

The motion was carried.

The convention then proceeded to elect the officers by ballot.

All the officers nominated by the committee, were unanimously elected.

The by-laws, schedule of fees, charges, etc., were then taken up and considered by sections and adopted.

BY-LAWS.

ARTICLE I.—*Meeting*.—There shall be a regular meeting of the association on the third Tuesday of January in each year, and at every such meeting the place of the next regular meeting shall be decided upon before adjournment. One third of the members in good standing shall constitute a quorum, but a smaller number may adjourn from time to time. No member shall be considered in good standing if more than thirty days in arrears for his dues.

ART. II.—*Rules of order*.—The meeting of this association shall be conducted according to "Roberts' Rules of Order."

ART. III.—*Application for membership*.—Any candidate for membership in this association, shall send his application in writing to the executive committee, indorsed by two fellows of the association in good standing, and who are personally acquainted with the candidate.

ART. IV.—*Election of members*.—When receiving an application for membership, the executive committee shall investigate the standing of the candidate, and shall by ballot admit or refuse him. All discussions of applicants shall be strictly confidential. Any person so selected, who shall not within three months after notice of election left or sent to his address, signify his acceptance and pay his proper fees and dues, shall be considered as having declined to become a member.

ART. V.—*Dues*.—All fellows of the association shall pay an initiation fee of \$5 and annual dues of \$2. All juniors shall pay an initiation fee of \$3 and annual dues of \$1. The first dues to the full amount shall be paid at the time of admission. Charter members shall be exempt from the payment of the initiation fee. All dues shall be payable at the regular meeting, and if not paid within thirty days thereafter, in default of which, any member shall be liable to suspension or expulsion by the executive committee.

ART. VI.—*Election of officers*.—All officers shall be elected at the annual meeting of the association, by majority ballot vote of the fellows present. An officer shall be eligible to the same office not to exceed two consecutive years, but all officers shall hold over until their successors shall be duly elected.

ART. VII.—*Papers and Records*.—All papers and other records shall be at all times open to the inspection of the fellows of the association.

ART. VIII.—*Committees*.—Juniors may serve on committees as follows: On committee composed of three, two must be fellows and one may be junior. On a committee composed of five or more members, two may be juniors, but not more than two juniors may be appointed to serve on any committee.

ART. IX.—*Amendments and By-Laws*.—The by-laws of this association may be amended by a two-thirds vote of the fellows present at any annual meeting.

SCHEDULE OF FEES AND CHARGES FOR PROFESSIONAL SERVICE.

Recognizing the desirability of uniformity throughout the country in the matter of fees and having implicit confidence in the action of the American Institute of Architects in this respect, it is

Resolved, That this association adopt the schedule of fees recently adopted by the American Institute of Architects, by the Western Association of Architects and by the Iowa and Missouri associations, and that the secretary of the association mail to each member a printed copy of this schedule as soon as practicable.

The following resolutions, passed by the Western Association of Architects, was unanimously adopted by the Kansas Association of Architects:

PRACTICE.

Resolved, That in his relations to his clients and contractors, the architect should be an impartial arbitrator, and that under no circumstances should he act as a special pleader for either party.

Resolved, That the relations between architects and clients should be confidential, and that no architect is worthy of employment who is unworthy of trust.

Resolved, That it is the sense of this association that the architect should in all cases superintend the work designed by him.

Resolved, That in the case where, for special reasons, the architect does not superintend the work designed by him, his responsibility ceases with the delivery and acceptance of the plans, unless by expert testimony it can be proven that the plans were defective.

The association then adjourned till Tuesday January 26, at 10 A. M.

SECOND DAY'S PROCEEDINGS.

The convention reassembled pursuant to adjournment at 10 o'clock A. M., Mr. Haskell in the chair.

The question of a code by which to conduct competitions was first taken up, and after considerable discussion it was decided to refer it to the executive committee with instructions to report at the next regular meeting.

Mr. Wood: I move that a committee of five be appointed by the president to have charge of the matter of legislation and report at the next meeting.

Mr. Parsons: I second that motion.

The motion was unanimously carried.

The president appointed the following as a committee on legislative matters: L. M. Wood, C. H. Parsons, J. C. Holland, F. J. Grodavent, and A. B. Howatt.

Mr. Wood: I move that the following resolution, in regard to the Stockslager bill now before congress, be adopted;

Resolved, That this association urge the Kansas delegation in congress to support what is known as the "Stockslager bill," establishing a commissioner of architecture and otherwise providing for the planning and supervision of government buildings; and that a copy of this resolution be forwarded to each member of congress from this state.

The resolution was adopted.

The secretary is instructed to forward a copy of the above resolution to each member of congress from this state.

Mr. Wood: I move that the secretary be instructed to have 100 copies of the constitution and by-laws printed, and made into pamphlet form.

This motion is carried.

Mr. Ropes: I move that all architects present and all whose names were represented for membership, be considered charter members, on payment of their dues.

The motion carried.

Mr. Carr: I move that THE INLAND ARCHITECT AND BUILDER be made the official organ of this association, and that the secretary be instructed to send an official report to that journal.

Mr. Wood: I second that motion.

The motion was unanimously carried.

Mr. Hopkins: I move a vote of thanks to Messrs. Hill & Co. for the courtesy they have shown this convention, and for the use of the hotel parlors.

The motion was unanimously carried.

Mr. Carr moved that the matter of a seal for this association be referred to the executive committee, who are to report at the next regular meeting.

The motion was carried.

Mr. Wood suggested that each fellow of this association in good and regular standing have the initials F. K. S. A. A. on their letter heads.

Mr. Hopkins: If all our business is done I will move that we adjourn to meet on the third Tuesday of January next at Topeka.

Mr. Grodavent seconded the motion, which was carried.

The convention adjourned to meet at Topeka, the third Tuesday in January, 1887.

ARCHITECT LOUIS H. SULLIVAN, secretary of the Illinois State Association of Architects, was complimented by the publication of his able paper upon the Characteristics and Tendencies of American Architecture read before the last meeting of the Western Association in the *Builder's Weekly Reporter*, of London, England. This paper has also been published by a number of prominent American journals.

Association Notes.

KANSAS CITY SOCIETY OF ARCHITECTS.

This Society was organized in April, 1885, with a membership of twenty-one local architects. Since that time four new members have joined, and two of its original members have been stricken from the roll, leaving twenty-three members at present.

The society meets weekly, on Mondays at 4. P. M., and there has been an average attendance of twelve members at each meeting since its organization.

As yet the society has done but little of general interest to the profession, but we anticipate greater results for the future. The meetings thus far have been more of a social nature than are usual with similar organizations, and to the genial feeling which exists among its members is attributed the cause of there having been so little accomplished of interest to the outsiders.

About two months ago the society provided itself with comfortable quarters which have been tastefully furnished and decorated, and recently added an adjoining and communicating room, which it is having prepared for the exhibition of building materials and appliances by manufacturers and others who desire, on the payment to the society of a nominal sum per square foot per annum for this privilege.

The society thinks that this feature will be beneficial to all concerned, as it saves the trouble and expense of sending to each architect samples of such goods by parties having them for sale, and relieves the architects of having the limited space in their respective offices crowded with the wares which are from time to time sent them.

Only the smaller articles of such appliances will be admitted, as there is only 250 square feet of space available, and, necessarily, the amount of space allowed each exhibitor will also be limited.

Parties desiring further information on this subject will please address the undersigned.

The society contemplates soon to subscribe for a list of architectural and scientific periodicals not usually patronized by individual members, the same to be kept on file at the society's rooms, and a committee has been appointed to prepare such list.

In view of the difficulties and disputes which have been caused by the system of measurement of brick and stone work which has been in vogue in this city, in cases where contracts are not let for a round sum, the society has a committee at work preparing what is hoped will be a more perfect and generally satisfactory system. Architect F. B. Hamilton is the secretary.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting, February 1st, was called by President Lawrie in the chair. After the minutes of the previous meeting were read and approved, some time was given to the discussion of the proper treatment of delinquent members, which was finally left to the Executive Committee for action on the next meeting.

The president then announced that the subject for the evenings sketching was a dormer window, and about fifteen of the members at the close of the session presented very creditable designs. The subject for the evening of the 15th instant will be a paper on stonework by J. F. Heatherington.

CIVIL ENGINEERS' EXECUTIVE BOARD.

Wm. T. Blunt, Secretary of the Executive Board of the temporary Civil Engineers' Committee on National Public Works, issues the following bulletin, dated Cleveland, Ohio, January 11, 1886.

To Civil Engineers' Societies and the Technical Press:

The societies so far heard from on the subject of the Cleveland convention are the following:

- December 15. Cleveland ratified and appointed committee. (John Eisenmann.)
- " 16. Boston appointed committee. (Clemens Herschel, L. F. Rice and Thomas Doane.)
- " 19. Philadelphia ratified and requested Board Directors to appoint.
- " 30. St. Louis appointed committee. (Robt. E. McMath.)
- January 4. St. Paul ratified and appointed committee. (Chas. F. Loweth.)
- " 5. Chicago appointed committee. (L. E. Cooley.)
- " 5. Southern ratified and appointed committee. (L. J. Barbot.)
- " 8. San Francisco, meeting.
- " 9. Technischer Verein, New York, meeting.
- " 11. Pittsburgh, meeting.
- " 12. Connecticut and Ohio, meeting.
- " 15. Indiana, meeting.
- " 18. Nebraska, meeting.
- " 26. Michigan, meeting.

Respectfully.

WM. T. BLUNT,
Secretary Executive Board.

MISSOURI STATE ASSOCIATION.

The following errata is furnished by Secretary Annan as corrections upon the report of the annual meeting published last month. *The report was as follows:*

Mr. Fassett: I have a couple of resolutions which were read before dinner, but not presented:

Resolved, That a special committee of five be appointed to present and urge its passage by the Missouri State Legislature at its next session, the architects' license bill, as adopted by the Western Association of Architects, with such amendments as may become necessary.

Seconded by J. M. D. Knox. Also:

Resolved, That the same committee be authorized to formulate and present to the same body a new form of lien law.

Seconded by Mr. Knox.

The correction is as follows:

"These resolutions were adopted and the chair stated that the names of members of such committees would be announced prior to adjournment."

The chair then suggested that it might be proper to take some action on the code as adopted by the western association.

This correction follows the above resolutions printed in the latter part of the upper half of the first column, on page 124, *Intermediate news supplement*.

A second correction is found in the election of officers and after the

first ballot for the third member of the Board of Trustees and should read as follows:

"Messrs. Tinsley, Hellmers and Bannon strenuously objected to the use of their names."

This latter correction explains the seemingly incongruous action of these gentlemen, particularly Mr. Hellmers whose election would have been contrary to his expressed opinion and was changed at his request.

Obituary.

At a regular meeting of the Rhode Island Chapter, held the 25th ult., the following minute was presented:

Henry A. Nisbet died at St. Luke's Hospital, Denver, Colorado, Dec. 18, 1885, after an illness of four weeks.

Mr. Nisbet was a junior member of this Chapter from March, 1876, until the summer of 1884 when failing health compelled him to leave Providence and seek a home elsewhere. He was born and educated in Scotland. He passed many years in this country in various offices as an assistant, and also in full practice of his profession. He died away from relatives and friends, but there are many who will mourn his loss. He was esteemed by all who knew him as a well-trained architect of modest worth, of quaint humor and of a sensitive and artistic temperament, and his death removes a personal friend of each member of this Chapter.

EDWARD I. NICKERSON, Secretary.

The remains of John McPherson, one of the brightest young men that ever went out from Rockford, Illinois, to win his way in the world, were brought home last week and interred in the Burrett cemetery of that city. Mr. McPherson was engaged as surveyor and draughtsman for a large mining company in Tennessee, and was a very fine expert, doing some of the best work ever done in that state. He was just in the prime of manhood, and gave promise of a splendid advancement in his profession.

Mr. H. E. Coe, the architect who obtained the premium of £800 for the best design for the new Foreign Office, London, which Sir G. G. Scott built according to Lord Palmerston's notion of art, is dead. He had shares in several large works at Islington.

Col. G. A. C. Smith, architect, for thirty-three years in the government's employ, died at his home, No. 239 Warren avenue, after having been confined to his house about three weeks. For thirty-three years Mr. Smith was in government employ, nearly fifteen years of which were spent as a Superintendent of Repairs, serving at Lincoln, Nebraska; Dubuque, Iowa, and Chicago, his service here lasting for three years, and closing June 1 of last year, when he was removed for cause, the reason given by the supervising architect, as we stated at that time, being because "his place was wanted for another man." He then formed a partnership with Architect A. K. Ackerman. Mr. Smith was born in Franklin, New Hampshire, in 1836. The funeral will not be held until his daughters, one of whom is in Dakota and the other at Baton Rouge, can get here. Col. Smith leaves a wife at the family home. He was a member of the Knights of Pythias and of the Association of Architects.

New Publications.

AMATEUR ART: Oil and Water Color Painting Without a Teacher; also How to Paint on Wood, Silk, Velvet, and Glass, with Directions for the Transferring of Photographs to Glass for Painting and Other Purposes, Cameo Oil Painting and for Coloring Mounted Photographs, Maps, Prints, etc. By HENRI CLARICE. Amateur Art Company, publishers, Chicago. Price \$1.00.

While the object of this handy little volume seems to be to afford beginners full instructions in regard to not only the best methods, but the best materials for each class of work, it is of value to any amateur who wishes not only to become proficient as an artist, but to afford those who have not the means to take a long and expensive course of tuition to develop any artistic taste they may possess. This "Amateur Art" gives, and it is surprising the amount of instructive matter contained in its seventy-five well written and printed pages. A page is devoted to a carefully prepared table of directions for mixing colors, which is an exceedingly valuable feature. A department has been added to the first edition upon modeling in clay and ware painting, which of itself is worth more than the price of the work.

WATER WASTE PREVENTION; Its importance and the evils due to its neglect, with an account of the methods adapted in various cities in Great Britain and the United States. By HENRY C. MEYER, Editor of the *Sanitary Engineer*.

This work is an octavo volume of seventy pages. It is addressed primarily to municipal authorities and civil engineers who are directly concerned with the management of waterworks. Architects usually give little attention to preventing the waste of water, feeling quite satisfied if they succeed in getting an abundant supply in every part of a house and in removing it properly after use. But they have to aid in the selection of plumbing faucets and other fittings, to whose defects a considerable part of the waste is due. Moreover, the water supply on the upper floors of city houses is often greatly reduced, and sometimes fails entirely, through the reckless waste of water elsewhere. Architects, therefore, as professional men, and as tax payers, are interested in a book which treats of the cause and extent of water waste in American cities, and the measures proposed for its remedy, and they will find these pages full of interesting and valuable information.

Very few people who have not given special attention to the matter have any correct idea of the enormous extent of the evil to which this book relates. Twenty to twenty-five gallons a day per capita, are considered an abundant allowance of water for all domestic purposes, with no special care to prevent waste. Where water for family use must be drawn from a well or cistern the average daily consumption probably falls considerably within this amount, but where the crystal fluid is conveyed through pipes to every part of a house, and can be had in abundance by simply turning a faucet, and where it makes no difference in the expense to the user whether he draws a cupful, whenever he wants a drink, or enough to fill a cistern, eighteen to twenty gallons a head do not begin to supply family necessities. In Boston, the daily consumption ranges from sixty gallons per capita in April to ninety-two gallons in January. In New York City a careful inspection appears to show that some nine thousand of the more prodigal water takers contrive to get rid of *three thousand gallons a day*

apiece, or twenty-seven million gallons in all. The clear loss in Boston alone, from the wanton waste of city water, with no advantage to anyone, probably exceeds \$500,000 a year, and in New York it must be proportionately greater. All this not only increases the cost of water to careful users, but frequently interrupts the supply entirely in the higher parts of the city, causing much personal discomfort beside increasing risks from fire.

Similar recklessness has been experienced in many cities in England, and has led to remedial measures, of which, and their gratifying success, this book gives a most interesting account. In Norwich, for example, the daily consumption was quickly reduced from forty gallons per head to fifteen, in Liverpool from thirty-nine gallons to about twenty, and in Glasgow the night consumption as quickly fell from forty-five gallons to ten. There is no question but that equivalent remedies must be employed in American cities, and architects should inform themselves of their nature, and lend their influence to forward so very necessary a reform.

A GUIDE TO SANITARY HOUSE INSPECTION; or Hints and Helps regarding the choice of a Healthful Home in City or Country. By WILLIAM PAUL GERHARD, C. E., Consulting Sanitary Engineer. Published by John Wiley & Sons, New York. Price \$4.25.

This is a modest duodecimo volume of 145 neat, clearly printed pages, which gives a concise and quite complete summary of the probable and possible defects in the location, construction and fittings of city and country houses which are injurious to health. After a circumspect glance at soil and surroundings, including the backyard, the author begins at the cellar, and goes through the house in minute detail, inspecting and testing the drains, the plumbing apparatus, the furnace or other heaters, the lighting, ventilation, disposal of refuse, and like practical matters. This is done separately for both city and country houses, and there is a short chapter each for apartment houses, tenements and summer resorts.

The book is admirably written, the style being simple and clear, and the subject being presented in an interesting manner throughout. It is thoroughly in accord with the most advanced principles which are generally accepted among sanitary authorities, without advocating extreme notions. To architects, builders and plumbers it can be recommended as the best known compendium of sanitary principles, as applied to buildings, useful for instruction and for reference. To householders its utility will unavoidably be lessened in a measure by the fact that the inspections suggested can often be made only by an expert. But it will be serviceable in the many directions where owners can inspect for themselves, and by informing them when and where they must resort to expert help. The list of unsanitary defects in modern houses, their plumbing, drainage, heating, ventilation, their soil and surroundings, which these pages contain is somewhat appalling, however, and may naturally produce a feeling akin to dismay in timid owners. For their comfort, it might be added, perhaps, that while all the requirements here mentioned are desirable, it is still possible, with ordinary care to live and be fairly healthy in many a home that is faulty in some of these respects. Indeed, we would hesitate to assume that our author, if requested, would be able to name a single house which could be called sanitarily perfect by the standard given in this admirable little book.

THE SUBURBAN COTTAGE: Its Design and Construction. By W. B. TUTHILL, A.M., Architect, New York: W. T. Comstock, publisher, 1885. Price \$1.50, post paid.

This practical and concise treatise on that class of building which more often falls to the lot of the builder but comes within the domain of the architect, the low cost house, occupies one hundred pages and contains a large number of diagrams, illustrative of the subject matter. This is classified under the different heads of: The Plan; Its Design and Requirements; Elevations; Masonry and Brick Work; Framing; The Roof; General Details; Plastering, and Plumbing. The purpose of this volume is evidently to lay before the student or the practitioner the better method of systematic design, involved in the preparation and construction of houses ranging in cost from one thousand dollars upward. The writer in the first chapter takes for example a house costing seven or eight thousand dollars. He proceeds to construct his house in simple terms and gives a vast amount of valuable information. It is noticeable that while the exterior design receives due consideration, that it is upon the planning of the interior that the writer devotes his most careful and studied efforts. In fact, throughout the entire construction, the practical hints are given with a marked clearness, making the book one that a builder should have within reach at all times for ready reference. The volume was first published in a series of articles in *Building*, and now in book form they are made more accessible and none the less valuable.

The London *Times* in speaking of "Salammbô," the masterpiece of Flaubert, the founder of the naturalistic school of literature, followed and debased by Zola and others, which has at length been translated into English by M. French Sheldon, and is now in the press, says "This fascinating story of love and war, rich in heroic Carthaginian lore, set in glowing barbaric splendour, surrounded with an atmosphere of dreamy tropical warmth and local colour, and with its weird serpent scene and mysterious cults, has long been regarded as an untranslatable work. It is said that this delicate task has been accomplished in such a subtle manner as to preserve all the vigor, natural realism, and idyllic style of the original. Flaubert's works have inspired more pictures in the French *salon* during the past few years than any book except the Bible. The appearance of "Salammbô" in English is looked forward to with great interest in the literary and art circles of the Continent. The introduction has been written by Edward King, the American poet, and the volume is dedicated to Henry M. Stanley, the famous explorer. The work will be published by Saxon and Co., London and New York."

GEN. BEAUREGARD gave a history of the Shiloh Campaign in the January number of the *North American Review*. He claims that Gen. Algernon Sydney Johnson acted only as a corps commander at Shiloh. Gen. Beauregard emphatically asserts (contrary to the common belief) that he was the sole commander on both days, and, without naming them, controverts the reports of Grant and Sherman as to the nation's forces

being taken by surprise. Canon Farrar had an article on the Church in America, and the Marquis of Lorne, Col. Ingersoll, Millionaires Astor and Carnegie, an Irish Member of Parliament elect, John Boyle O'Reilly, Cassius M. Clay, Sir John MacDonald, and Frank B. Sanborn also had articles in the January number.

Our Illustrations.

Group of residences at La Grange, Illinois: for A. H. Lanphere, G. W. Blakeledge, Henry Werno and Wm. Haskins; by Clarence L. Stiles, architect, Chicago. They are frame construction of an average cost of \$4,000.

Residence of Geo. Kirk, Esq., at Waukegan, Illinois; by W. W. Boyington, architect, Chicago; veneered with brick on first story, frame above. Inside finished, red and white oak, cherry and pine, natural finish; cost about \$15,000.

Union passenger station, at Birmingham, Alabama, for the Louisville & Nashville Railroad; by H. Walters, architect, Louisville, Kentucky.

Residence for A. J. Wolford, Chicago; by W. L. B. Jenney, architect, Chicago. The perspective is by W. B. Mundie, the excellence of whose drawings we have had occasion to notice before. The front is entirely of Colorado redstone, all rock faced; three stories and basement; interior handsomely finished in natural hard woods; plate glass; beveled glass in door; all sheet metal work of copper; cost about \$9,000.

Accepted design for a memorial to General U. S. Grant, for Lincoln Park, Chicago, Illinois; by Francis M. Whitehouse, of the firm of Burling & Whitehouse, architects, Chicago. The selection of the design was made by a committee composed of General W. E. Strong, chairman, Norman Williams, Potter Palmer, J. McGregor Adams and Samuel K. Nickerson. The first designs were requested from architects, and several very creditable designs were submitted. The general form of the design accepted presents a footway connecting the walk which surrounds the pleasure lake in the park with the promenade which extends north and south parallel to the lake drive. This footway passes underneath the raised road, and is formed of solid blocks of granite, thus allowing pedestrians to pass under the road-bed. The east end of this granite arch is faced with a terrace 150 feet long of solid granite work, and having two flights of massive steps extending to the level of the roadway above, at which point it is to be erected a solid granite elevated structure, 50 feet long by 20 feet wide, through which will pass a foot way and at the side a raised roadway, which structure will be in keeping with the facade of the terrace, all of massive granite, Norman-Gothic in treatment, with rounded buttresses and corners of hammered granite, the two sides being perforated by five massively constructed arches, through which a beautiful view of Lake Michigan and the Park will be had. Above the structure and surmounting the hill will be a massive granite base 8 feet high and 15 feet long, constructed of large blocks of granite in a solid and substantial manner, upon which will stand a bronze statue of General Grant. The monument complete will cost \$50,000.

New Architectural Firms.

THE firm of Smith & Fulkerson, architects, Cedar Rapids, Iowa, was dissolved January 1, Mr. Smith retiring. Mr. W. A. Fulkerson will continue the business in the old quarters, in the Post-office block.

JOS. E. MILLS, late head assistant with Architect E. E. Myers, of Detroit, Mich., has opened an office at No. 6 Cleland building, also that Architect E. E. Myers has taken his son, Geo. W. Myers, into partnership under the firm name, E. E. Myers & Son.

McCaffee & Lively is the title of a new firm to the profession in Chicago. Both gentlemen are well known as leading draughtsmen, and have entered practice with the desirable amount of talent and experience as well as a considerable quantity of immediate work.

O. L. Wheelock, who has been known as a prominent Chicago architect for considerably more than a quarter of a century and is the designer of a large number of the best buildings, upon the recent dissolution of the firm of Wheelock & Clay formed a copartnership with Robert Rae, Jr. Mr. Rae has practiced in Chicago for 16 years.

Allen & Coxhead is the legend upon the office sign formerly monopolized by the well known name of F. S. Allen, at Streator, Ill. Mr. Allen has enjoyed an extensive business in the interior of the state. Mr. John H. Coxhead is a young man of considerable designing talent, recently from Chicago, but originally from New York. His sketches equal the best work of Mr. Edward Denison, under whom he studied. The combination makes a strong architectural firm.

George Beaumont has opened an office in the Illinois Bank Building, 115 Dearborn street. Mr. Beaumont was for several years Superintendent for the late firm of Wheelock & Clay. He studied architecture in Leeds, England, and obtained the medal of the Leeds and Yorkshire Architectural Society in 1879, and in the following year was elected a member of the Royal Institute of British Architects in London. He traveled extensively on the continent of Europe in further search of architectural knowledge, and with his varied experience in this city, we have no doubt that he will be successful in his profession.

It is understood that Architect O. C. Wehle, of Louisville, will soon enter into partnership with W. J. Dodd, of Chicago. Mr. Dodd studied architecture in the office of Architect W. L. B. Jenney, of Chicago; was engaged by Architect S. S. Beman during the building of the town of Pullman, and being recommended by that architect to the Northern Pacific Railway, was employed as architect of that road, with headquarters at Portland, Oregon. Soon after the stoppage of work on that road Mr. Dodd came east and reentered the office of Mr. Beman, where he remained until engaged some months since by Mr. Wehle. Mr. Dodd will be a valuable addition to the architects of Louisville.

Architect W. W. Clay, the former partner of the veteran architect, O. L. Wheelock, has engaged Mr. Harry Lawrie as head draughtsman of his designing department. Mr. Clay's well known ability, together with

Mr. Lawrie's valuable services, will make this one of the strongest architectural firms of Chicago. Mr. Lawrie was born in Dumfries, Scotland, studied his profession in Glasgow, where his talents became so recognized that he was made president of the Draughtsmen's Association of that city. Coming to Chicago several years ago Mr. Lawrie entered the office of Burnham & Root, where his services have been valuable and recognized. Mr. Lawrie is president of the Chicago Architectural Sketch Club. The new arrangement will go into effect on the 15th instant.

Correspondence.

ST. LOUIS, MO., February 5, 1886.

Editors of Inland Architect and Builder:

Will you please advise me through the columns of your valuable paper as to the advisability of using yellow pine for doors and finish, etc.? Is it used much in Chicago? What per cent more does it cost finished in its natural state than white pine (grained)?

Respectfully yours, JOHN A. FOLSOM.

[In regard to the advisability of using yellow pine for doors, finish, etc. we would say, that we have heard no complaints where this has been used for interior finish, though, with the exception of public buildings, the bulk of Chicago trade for yellow pine interior finish has gone into interior work for floors in residences, such as servants' rooms and for halls and, to some extent, basements. As to its staying qualities, we believe it is just as good as white pine; and as to the difference in cost in natural finish of yellow pine, of white pine grained, it would depend altogether upon the quality of white pine used. Yellow pine can be bought from \$28 to \$32 for finishing stock, and the same grade of white pine would cost from \$40 to \$45. The expense of graining we should estimate to be greater than the natural finish of yellow pine. While we have great faith in the growth of the yellow pine trade, yet for interior finish there is nothing like oak, birch, ash and maple, all of which can be placed at a much less figure than clear white pine. Of course the expense of finishing is an item which adds materially to the cost of hardwood over soft, yet the satisfaction one derives from the staying qualities of hardwood one can readily see to be a great desideratum.—EDITORS INLAND ARCHITECT AND BUILDER.

CHICAGO, Ill., Jan. 9, 1886.

Editors Inland Architect and Builder:

We believe the inclosed slip clipped from the *Chicago Times*, possesses enough merit to warrant a notice in your columns, as a matter of interest to architects and the public. Yours respectfully, J. M. L.

To the Editor:

CHICAGO, December 15, 1885.

The recurrence at intervals of terrible loss to life and property from the burning of public buildings, theaters, halls, hotels and other places where numbers gather together should teach the authorities as well as the people at large the folly of such construction. Private capital has found it advisable and profitable, solely on business principles, to build large structures on a practically fireproof plan. Public officials would doubtless find it equally advisable and profitable to build in this way, and, in fact, have done so in most of the structures erected within ten years past. The wisdom of this was lately demonstrated in the county building, where, through carelessness, the gas was allowed to escape and fill the office of the county superintendent of schools with flame, which burned all night, doing no damage further than to blacken the fire-proof walls, floors and ceilings of this single compartment. The incident arouses the dreadful reflection that if by any cause a fire should break out in any one of our city schools there would be no fireproof walls and ceilings to confine it, but, on the contrary the wooden pile which constitutes the entire interior would burn like tinder. Over fifty thousand children attend these schools, most of them incapable under the slightest excitement of any forethought or judgment. A false economy or the fear of evoking criticism has thus far prevented the authorities from introducing anything but wood in the construction of schoolhouses. They have acknowledged the existence of imminent danger to life by other precautions. That on which most reliance is placed is a "fire test" calculated in case of fire to get all the children out of the building in time to avoid being incinerated in their mammoth crematories. Sometimes the "test" has worked satisfactorily. It was tried in a West-side school house a year or two ago. The bell struck at an unusual hour. The children were started in good order. They had learned that the test was to be made. Notwithstanding this, the very thought of fire caused them to break in wild confusion in the wide halls, resulting in serious injury to a teacher, who was thrown to the bottom of the staircase in the precipitate flight of the school. The children knew there was no fire, but even with this knowledge could not control their groundless fears. If a real fire should break out, would they be better able to maintain good order? If flames should start at the most probable point, the basement, the wide halls and draughts from the street would send the flames in a very few moments from the bottom to the top of any one of these pine-built school houses. The first thing to burn would be the staircases. The children could not live a moment in the stifling smoke in the halls. *They could not escape.* The life of every scholar is in danger every hour it is housed in our city schools.

Chicago is not alone in this criminal neglect to provide for the safety of school children. There are very few school buildings in the country where even the reasonable precaution has been taken of introducing hollow tile in the ceilings and walls and iron girders instead of pine joists. The expense would be but little more than the cost of wood construction. It would be something more, however, and until the parents of the school children demand that their children shall have some protection, and bring the matter prominently before city councils and school boards, it is probable that the school children will continue to be crowded into buildings

which are a constant menace to life and limb. Why should the adult population, which is, presumably, in a measure able to look out for itself, be given a security which is denied to the children, who certainly need it more than they? COMO.

Mosaics.

LOCKWOOD & KIMBELL have enjoyed a copartnership for a year, and with it a fair amount of the pressed brick trade of Chicago. As the representatives of the St. Louis Hydraulic Pressed Brick Company, they have kept this product in unlimited stock at their yards at Fifth avenue and Polk street. Though they still keep a full supply at these yards they have moved their office up town so as to be near the offices of the architects, and are now occupying a handsomely appointed and spacious suit of three rooms at 162 Washington street, just west of La Salle, where architects and patrons will not only find a welcome but enjoyable surroundings when they call. These gentlemen have arranged a sample box of convenient size and attractive appearance for displaying the different shades and styles of brick for distribution in architects' offices, so that their patrons may have them for instant display or examination.

It is understood that an agency will soon be established in Chicago for the introduction in the west of a most durable syenite granite for building purposes, and also a beautiful verd-antique for interior finish. The following is the opinion of Mr. J. P. Leslie, State Geologist of Pennsylvania, in regard to this granite: "You have an unlimited quantity of the rock, and it can be gotten out in very large pieces. It is practically all of the same quality; is more durable than the ordinary granite, and in fact will last forever, not being subject to the action of the atmosphere, to an appreciable extent. Thousands of years of exposure has merely given a brown skin to the loose rock. A wall built of such specimens as you have sent from your quarry for my inspection would stand unchanged for centuries." The Smithsonian Institute specimen of this rock is marked Hornblende Syenite. The syenite granite is from Chester county, Pennsylvania, and the quarry is owned by J. H. Brinton, owner of the celebrated greenstone.

E. T. BARNUM, manufacturer of wire and iron work, of Detroit, Michigan, issues the following circular to the trade. It is a manly explanation and deserves notice.

About twenty years ago, in 1866, the undersigned started, in a small way, the manufacture of wire and iron work, giving employment to less than ten men. At that time the wire business was in its infancy, and the practical uses of wire work were very imperfectly developed. In 1879, the business had increased so that buildings four stories high and one hundred feet square were secured, giving employment to over four hundred men. In 1882, a joint stock company was organized (of which I was president and general manager), and, in order to meet the wants of the trade, buildings were erected and occupied in 1883, giving employment to over seven hundred men. The panic in the spring of 1884, found the company with a large stock of manufactured goods ready for the spring trade, and being somewhat extended for the times, together with internal dissension among a few of the stockholders, finally resulted in the E. T. Barnum wire and iron works going into the hands of a receiver, showing assets of \$115,000 over liabilities. Recently, December 3d, 1885, a fire occurred, burning the works, which were the most extensive and complete in all its appointments in the world. This fire has destroyed the work of years, and at a time when re-organization was being perfected.

I would respectfully announce that, notwithstanding these misfortunes, I have made arrangements to promptly fill orders for wire and iron work that may be sent to me, and that I propose, as soon as possible, to get the business in running order again.

Thanking my old friends and customers for their many expressions of kindly feeling, and asking their future orders, which will have my prompt and careful attention.

Very respectfully,

E. T. BARNUM.

P. S.—Letters intended for me, but addressed E. T. Barnum Wire and Iron Works, frequently get into other hands. For the present please leave off the wire and iron works, and address your letters, E. T. BARNUM, DETROIT, MICH.

A PROCESS that is in successful use by the Hecla Architectural Bronze and Iron Works, Poulson & Eger of New York, many examples of which are sent from their works and are in general use in Chicago, and for which that firm have lately appointed a resident agent here, Richard Robins 161 La Salle street, is described in a recent number of *Engineering*. The article says: "The Bower-Baff process for protecting iron from rust, by covering it with a skin of magnetic oxide of iron, appears to be steadily gaining in favor in Germany. It is not infrequently mentioned in German technical journals, and always with approval. Recently at a meeting of a branch of the German Engineers' Society, at Hanover, a paper was read by one of the members, in which he very strongly recommended the process to engineers and architects. Speaking of the fine blue-gray color of the coating formed, he said that this was always the more beautiful the cleaner the surface of the articles operated upon. The coating adheres very strongly to the metal, but still not so strongly as to allow of working iron so coated beyond a very limited extent. Thus wire cannot be bent without cracking off the oxide formed on it. Therefore all articles to be protected should be finished before the oxidation takes place. As regards the strength of iron treated by the process, the results of experiments go to prove that wrought-iron does not in any way suffer by the oxidation, and that cast-iron gains in strength, inasmuch as the outer surface is to a considerable extent changed, and made like a malleable cast-iron, gaining in toughness. There is a gain in weight of about one-half of one per cent, owing to the oxidation, and a scarcely perceptible increase of volume. The protection is very perfect, as has been proved by burying test-pieces for one year in the ground in very damp and unfavorable places. The coating is liable to have its appearance injured by handling, and for objects where this is a matter of importance, it is better to brush the surface over with grease or wax, which is absorbed into the oxide and remains in it, permanently protecting it. Another property of objects coated with the oxide is specially pointed out as of great value for some purposes, especially for objects of art. The oxide coat easily takes enameling, silvering, gilding or platinizing. The enamel, or the solution, can be put on direct upon the oxide, and then, after firing, adheres perfectly and has not the tendency to crack off, as in the case of its application to the bare iron. Then a coating of bronze or other metal can be given to objects in the simplest manner by brushing them over with a brush made of the metal in question. So much of the metal penetrates the oxide coating that the result is perfectly permanent."

The Year 1885.

Ann Arbor, Mich.—Business buildings, cost \$34,560; residences, cost \$69,900; repairs, etc., \$52,350. Total, cost \$156,810. Expended on public works \$247,700. Total \$404,510. Total 1884, \$444,875.

Anoka, Minn.—The amount expended in building improvements in this city during 1885 is estimated at \$500,000. Total 1884, \$349,000.

Aurora, Ill.—Brick dwellings, 3; cost \$12,000. Frame dwellings, 75; cost \$112,500. Brick business buildings, 17; cost \$96,000. Miscellaneous buildings, etc., cost \$17,800. Total cost, \$238,300.

Baltimore, Md.—3,237 permits were issued; cost \$4,340,125.

Battle Creek, Mich.—Brick residences, 2; cost \$3,000. Frame dwellings, 157; cost \$125,000. Brick business buildings, 9; cost \$18,000. Miscellaneous buildings, 4; cost \$12,500. Total 172 buildings, cost \$58,500.

Benton Harbor, Miss.—Brick dwellings, 2; cost \$2,800. Frame dwellings, 42; cost \$34,300. Brick business buildings, 4; cost \$8,070. Miscellaneous buildings, cost \$36,100. Total cost \$81,270.

Boone, Iowa.—Building improvements during 1885 cost \$89,500.

Burlington, Iowa.—Building improvements during 1885 cost about \$500,000.

Cedar Rapids, Iowa.—Brick residences, 1; cost \$6,000. Brick and stone residences, 4; cost \$84,000. Frame dwellings, 144; cost \$204,650. Brick business buildings, 3; cost \$14,500. Brick and stone business buildings, 5; cost \$175,500. Miscellaneous buildings, 16; cost \$85,900. Total, 173 buildings; cost \$570,550. Total 1884, \$927,580.

Charleston, S. C.—Brick residences, 4; cost \$6,900. Brick and stone residence, 1; cost \$75,000. Frame dwellings, 212; cost \$156,300. Brick store buildings, 5; cost \$12,800. Miscellaneous buildings improved, 158; cost \$121,175. Total 380 buildings, cost \$372,175. The report for the same period in 1884 was 465 permits and the reported cost \$320,100, showing an increase for the year 1885 as compared with the year 1884, of \$52,075.

This statement does not include the cost of repairs made necessary by the cyclone in August last. Col. Wm. Aiken Kelly, the city assessor, says that at least \$500,000 has been expended for the repair of damages. Allowing this estimate, \$872,000 will be the total. Total 1884, \$584,555.

Chicago, Ill.—South Division—Number of buildings, 1,122; feet frontage, 25,941; cost \$6,748,900. Basements and additions, 104. West Division—2,772 buildings; 63,073 feet frontage; cost \$8,531,900. Basements and additions, 322. North Division—744 buildings; 19,836 feet frontage; cost \$4,183,700. Basements and additions, 99. Total, 4,638 buildings, 525 basements, 1,604 sheds, 108,952 feet frontage; cost of buildings \$19,467,700; cost of sheds \$160,000. Grand total cost, \$19,624,100. Elevator certificates issued in 1885, 321, at two per cent. per certificate, \$642. The number and amount of fines for violation of building ordinances: Number, 155; amount for 1885, \$3,425. Receipts, January 1, 1885, to December, 1885: Building permits, \$20,566.30. Expenditure about \$19,500. Total 1882, 3,113 buildings; 73,161 feet frontage; cost \$15,842,800. Total 1883, 4,086 buildings; 85,588 feet frontage; cost \$17,500,000. Total 1884, 4,169 buildings; 98,782 feet frontage; cost \$20,689,600.

Cincinnati, O.—664 building permits were issued. Total cost of new buildings, according to valuations given the comptroller, \$2,072,058.10.

Clinton, Iowa.—Total expenditure in building during 1885, \$553,080; 1884, \$368,800; 1883, \$365,000; 1882, \$414,000; 1881, \$318,000; 1880, \$160,000.

Council Bluffs, Iowa.—The only possible way we have found to obtain anything like an accurate report of the amount of building done during 1885 is by taking the individual reports of the contractors, which are as follows: Messrs. Wickham Bros. report total, \$71,400; Mr. Battan reports total, \$23,500; F. Grass reports total, \$22,642; P. H. Wind reports total, \$34,500; J. F. Cody reports total, \$13,400; Messrs. Herman & Brown report total, \$15,900; Martin Hughes reports total, \$31,500; W. A. McMillen reports total, \$11,000; James Bodertha & Co. report \$5,100; C. Bosen reports \$11,000; C. Straub reports \$28,000; Mr. Covalt reports \$20,000; Mr. Lawson reports \$22,000; J. P. Weaver, \$9,500. Miscellaneous, \$55,600. Total reported, \$343,542. Total 1884, \$363,000.

Denver, Colo.—Brick and brick and stone residences, 152; frame dwellings, 14; cost \$12,150. Business buildings, 49; cost \$256,400. Churches, 3; cost \$19,500. School buildings, 2; cost \$11,000. Additions and repairs, 150; cost \$126,980. Total, 409 permits; cost \$790,980. Total 1884, \$1,909,426.

Des Moines, Iowa.—Brick residences, 27; cost \$94,500. Brick and stone residences, 15; cost \$58,750. Frame dwellings, 936; cost \$1,084,001. Frame business blocks, 11; cost \$39,050. Brick and stone business and factory buildings, 37; cost \$680,915. Total 1,026 buildings, cost \$1,957,216. Total 1884, \$2,830,674.

Detroit, Mich.—Permits were issued for 1,891 new buildings; cost \$3,103,873; 458 additions and alterations, cost \$341,203. Total cost, \$3,445,076. Building fees \$628.60. Besides the buildings above referred to, permits were issued for a number of fuel and other small sheds valued at \$8,313. There is also to be added an item of \$24,930, being for changes in plans after the permits were issued. This makes a total for the year of \$3,478,319. Of the buildings the most costly is the new Cass Hotel, \$70,000. Of buildings valued at from \$20,000 to \$50,000 there were erected 17; from \$10,000 to \$20,000, 26; from \$5,000 to \$10,000, 90; from \$1,000 to \$5,000, 521. The character of the buildings erected is shown in the following classification: Dwellings, 1,394; stores, 210; barns, 183; store houses, 15; manufactories, 12; carpenter shops, 7; offices, 7; blacksmith shops, 6; churches, 5; school houses, 5; foundries, 5; blocks for offices, 3; hotels, 3; miscellaneous buildings, 37. Of these buildings 563 were constructed of brick, and 1,328 of wood. Of the additions and alterations 101 were of brick and 356 of wood. Total 1884, \$3,676,227.

Detroit, Minn.—The amount expended in building improvements in this city during 1885 is estimated at \$120,000.

Dubuque, Iowa.—Brick residences, 76; cost \$123,700. Brick business buildings, 17; cost \$59,400. Frame dwellings, 69; cost \$53,050. Miscellaneous buildings, 9; cost \$51,150. Total, 171 buildings; cost \$287,300. The above is a correct report of the building permits issued. Total 1884, \$276,543.

Duluth, Minn.—Total amount expended in improvements during 1885, \$1,525,110. Total 1884, \$1,142,900.

Emporia, Kan.—Brick residence, 1; cost \$40,000. Frame dwellings, 125; cost \$125,000. Brick business buildings, 3; cost \$25,000. College building, 1; cost \$65,000. Total, 130; cost \$255,000; Total 1884, \$120,000.

Faribault, Minn.—Brick residence, 1; cost \$2,000. Brick business buildings, 2; cost \$20,000. Frame dwellings, 36; cost \$35,000. Addition to Deaf and Dumb Institute, cost \$12,000. Total, 40 buildings, cost \$69,000. Additions, barns, etc., cost \$43,000. Grand total, \$112,000.

Fond du Lac, Wis.—Brick residences, 6; cost \$25,000. Brick business buildings, 4; cost \$52,000. Frame dwellings, 22; cost \$44,500. Miscellaneous buildings, 4; cost \$48,000. Total, 36; buildings cost \$169,500; waterworks cost \$150,000. Grand total \$319,500.

Galena, Ill.—Brick residences, 2; cost \$3,000. Frame dwellings, 21; cost \$26,900. Miscellaneous buildings, 14; cost \$5,350. Total, 37; buildings cost \$35,250. Total 1884, \$31,000.

Galesburg, Ill.—Brick residence, 1; cost \$2,000. Frame dwellings, 70; cost \$85,000. Brick business buildings, 4; cost \$22,000. Miscellaneous buildings, 4; cost \$8,500. Total, 79 buildings; cost \$117,500.

Hay Springs, Wis.—Building improvements during 1885 cost \$85,550.

Helena, Mont.—A careful estimate of the buildings erected during 1885 in Helena shows over \$700,000. This includes the Masonic temple and Union block, two of the largest structures in the city. The plans for a number of new buildings of vast importance have been drawn, and the work will be commenced as soon as the weather permits.

Indianapolis, Ind.—Cottage houses, 409; cost \$325,850. Frame residences (two-story), 26; cost \$149,900. Brick residences (two-story), 9; cost \$42,200. Business buildings, 82; cost \$310,250. Additions and repairs, 355; cost \$96,900. Total 931 permits issued; cost \$925,100. Total for 1884, 499 permits issued; cost \$967,835.

Iowa City, Iowa.—Building improvements during 1885 cost about \$55,000.

Jackson, Mich.—Brick residences, 9; cost \$31,620. Brick and stone residence, 1; cost \$75,000. Frame dwellings, 109; cost \$199,835. Brick business buildings, 11; cost \$140,800. Miscellaneous buildings, 18; cost \$198,925. Total 148 buildings; cost \$646,180.

Janesville, Wis.—Building improvements during 1885 cost \$197,000. For 1883, \$438,000. For 1884, \$200,000.

Joliet, Ill.—Brick residences, 3; cost \$12,000. Frame dwellings, 250; cost \$280,000. Brick business buildings, 3; cost \$30,000. Brick and stone court house, 1; cost \$150,000. Miscellaneous buildings, 45; cost \$60,000. Total 302 buildings; cost \$532,000. About \$25,000 has been expended in suburban buildings not included in above estimate. Total 1884, \$225,000.

Kalamazoo, Mich.—Total 185; buildings cost \$526,950. Total 1884, \$366,750.

Kansas City, Mo.—Brick and stone residences, 392; cost \$1,865,895. Frame dwellings, 851; cost \$870,578. Brick business buildings, 310; cost \$2,535,525. Frame business buildings, 291; cost \$303,335. Miscellaneous buildings, 1,070; cost \$183,296. Total 2,904; cost \$5,758,629. All the above were erected on an area of 4 $\frac{5}{16}$ square miles, being the old city limits. The estimate of commercial Kansas City new city limits is \$7,758,629. Total expenditure for building 1884, \$6,680,602.

Keokuk, Iowa.—Brick residences, 3; cost \$8,250. Frame dwellings, 28; cost \$36,650. Business buildings, 4; cost \$9,000. Stone church, 1; cost \$20,000. Miscellaneous buildings, repairs, etc.; \$21,750. Total cost \$95,650. Total, 1884, \$110,400.

Knoxville, Tenn.—Business buildings, 40; cost \$98,000. Manufactories and miscellaneous buildings, 18; cost \$271,000. Public buildings and works, 14; cost \$307,000. Private dwellings, 260; cost \$210,000. Total 332 buildings; cost \$886,000. Total for 1884, \$991,800.

La Crosse, Wis.—Public buildings cost, \$258,025. New dwellings, cost, \$378,335. Additions and improvements cost, \$55,755. Total \$692,375. Additions to water works, sewer, etc., cost, \$86,800. Total improvements, \$779,315. Total 1881, \$504,450. Total 1882, \$478,175. Total 1883, \$640,640. Total 1884, \$654,465.

La Salle, Ill.—Frame dwellings 46; cost \$36,800. Brick and stone business building, 1; cost \$3,000. Miscellaneous buildings, 3; cost \$2,800. Total, 50 buildings; cost \$42,600. Total 1884, \$67,000.

Little Rock, Ark.—Brick residences, 2; cost \$8,000. Brick business buildings, 12; cost \$38,000. Miscellaneous buildings cost \$226,990. No record of frame buildings is kept. "Miscellaneous" includes the following buildings in course of erection by the state; school for the blind, insane asylum, addition to the penitentiary, remodeling of state capitol, also Hyde's Opera House and the Pulaski county jail. Total expenditure for 1885 was \$272,990.

Los Angeles, Cal.—The architects report the following as gross amount of their work in Los Angeles during 1885: Architects Boring & Haas, total \$200,000. Architect R. B. Young, total \$180,000. Architect John Hall, total \$160,000. Architect A. M. Edelman, total \$51,300. Architect C. H. Brown, total \$98,600. Architects Kysor & Morgan, total \$265,350. Architect B. J. Reeve, total \$160,300. Total buildings under \$2,000, 36; buildings between \$2,000 and \$4,000, 64; buildings between

\$4,000 and \$6,000, 28; buildings over \$6,000, 47; grand total of buildings, 175; grand total of valuation, \$1,115,550. This does not include Architect C. W. Davis' list, which was not obtainable. Total for 1884, \$1,219,650.

Louisville, Ky.—Brick residences, 166; cost \$508,850. Frame dwellings, 453; cost \$343,952. Brick and stone residences, 2; cost \$31,250. Brick business buildings, 55; cost \$395,987.50. Brick and stone business buildings, 7; cost \$80,625. Brick churches, 4; cost \$27,250. Brick club house, 1; cost \$7,500. Miscellaneous buildings, 205; cost \$48,193.75. Total, 893 buildings; cost \$1,443,605.75. Not included in the above is \$19,456.70, amount expended during the year ending September 30, 1885, according to report of supervising architect, for building the court house, postoffice, etc. The building is to cost \$1,000,000. Total expenditure to date, including site, \$160,937.55. This makes the total amount of building improvements for 1885, \$1,604,536.30. In the last ten years 75 per cent of the buildings of Louisville have been constructed of brick, iron and stone, and it is estimated that during this period at least \$10,000,000 have been expended in permanent buildings. Total 1884, \$1,537,993.

Madison, Ind.—Brick residences, 40; cost \$40,000. Brick and stone residences, 5; cost \$100,000. Frame dwellings, 50; cost \$40,000. Brick business buildings, 10; cost \$100,000. Brick and stone business buildings, 2; cost \$20,000. Cotton mill, 1; cost \$200,000. Woolen mill, 1; cost \$50,000. Opera House, 1; cost \$20,000. Stone foundry, 1; cost \$15,000. Baptist church, 1; cost \$8,000. Livery stable, 1; cost \$5,000. Total, 113 buildings; cost \$598,000.

Madison, Wis.—Building improvements during 1885 cost about \$500,000.

Mankato, Minn.—Total amount expended in building and improvements during 1885, \$240,350.

Milwaukee, Wis.—Brick and stone residences, 76; cost \$351,500. Brick business buildings, 52; cost \$568,500. Frame business buildings, 10; cost \$25,000. Frame dwellings, 190; cost \$347,500. Factory buildings, 14; cost \$182,000. North Western Mutual Life and Fire Insurance Company's stone building, \$300,000; C. M. & St. P. R. R. depot, stone, \$225,000; County jail, brick \$100,000; three public schools, brick, \$80,000; two fire engine houses, brick, \$19,000; art gallery, stone, \$75,000; two brick churches, \$48,000; Light Horse Squadron armory, stone, \$35,000; gas house, brick, \$20,000; panorama building, frame, \$16,000; roller rink, frame, \$13,000; private school house, brick, \$10,000; grain elevator and malt house, wood, \$40,000. Total cost, \$981,000. Grand total, 358 buildings; cost \$2,455,500. Total 1884; \$3,063,531.

Minneapolis, Minn.—Brick and stone business buildings, 81; cost \$1,274,050. Brick veneer business buildings, 12; cost \$62,910. Frame business building, 57; cost \$58,785. Frame dwellings, 1,362; cost \$2,956,300. Miscellaneous buildings, 1,554; cost \$1,776,223. Total 3,066 buildings; cost \$6,128,293. This report dates from March 1st to December 1st. Total 1884, \$7,621,950.

Mobile, Ala.—Brick residences, 8; cost \$37,000. Brick business buildings, 8; cost \$80,000. Frame dwellings, 48; cost \$97,000. Miscellaneous buildings, 10; cost \$22,000. Total 74 buildings; cost \$236,000.

New Haven, Conn.—Brick buildings, 89; frame buildings, 324. Total 413; cost about \$1,500,000.

New York, N. Y.—Estimated cost of all buildings for which plans were filed during 1885; \$44,214,563. 1884; \$41,461,208. 1883; \$48,845,000. 1882; \$49,000,000. 1881; \$47,543,000. Work was begun on 2,400 buildings in 1884 and on 2,704 in 1885. Last year 2,473 buildings were completed. Over 2,550 have been erected this year, and 2,113 are in various stages of construction. Of this number 673 are below Twenty-third street. Among the most expensive buildings for which plans were filed this year were a French flat house at Thirty-fifth street and Fifth avenue, to cost \$600,000; the Emigrant Industrial Savings Bank in Chambers street, to cost \$500,000; an office building at Nos. 8, 10 and 12 Wall street, sixty-six feet front, to cost \$500,000; and many others costing from \$100,000 to \$250,000 each. The Equitable Life Assurance Society has made application for the erection of a building to occupy the space between Nos. 116 and 124 Broadway, Nos. 62 and 82 Cedar street, and to extend to Pine street. The plans for this building are not completed. It will cost, it estimated, \$2,000,000. During the eleven months of 1885, ending November 30, the estimated cost of dwelling houses in this city for which plans were filed and which were to cost less than \$20,000 each, is \$8,693,000. The estimated cost of dwellings worth between \$20,000 and \$50,000 is \$3,875,100. The estimated cost of flats costing over \$15,000 this year is \$14,858,000. In 1884 the cost of this class of building was less than \$8,000,000. The estimated cost of tenement-houses to cost less than \$15,000 for which plans were filed in 1884, was \$14,992,100. The cost of such buildings in 1885, was \$7,455,100.

Omaha, Neb.—Residence buildings, cost \$1,609,630. Store and warehouse buildings, cost \$701,000. Hotel buildings, cost \$120,000. Manufacturing buildings, cost \$342,750. School and church buildings, cost \$92,600. Total cost, \$2,865,980. Public improvements, \$922,707. Grand total \$33,788,687. Total 1884, \$3,687,400.

Oshkosh, Wis.—Brick and stone residences, 2; cost \$14,000. Frame dwellings, 155; cost \$180,000. Brick and stone business buildings, 7; cost \$29,000. Frame business buildings, 32; cost \$48,600. Mills and factory buildings, 7; cost \$84,359. Miscellaneous buildings, cost \$79,270. Electric light plant, cost \$3,600. Total cost, \$458,829. Total 1884, \$737,000.

Ottawa, Ill.—Brick residence, 1; cost \$8,000. Frame dwellings, 31; cost \$48,000. Brick and stone business building, 1; cost \$5,000. Miscellaneous buildings and repairs, cost \$6,000. Total 33 buildings, cost \$67,000.

Peoria, Ill.—Residences, 75; cost \$235,850. Business and miscellaneous buildings, etc., 27; cost \$244,800. Total cost, \$480,650. The

above report is incomplete, nor does it include the amount expended upon the government building now in course of construction. Total 1884, \$659,500.

Philadelphia, Pa.—Brick residences, \$5,406. Brick stores and dwellings, 264. Brick store buildings, 88; additions and alterations, 568. Total number of permits issued, 7,964. No account of cost has been kept by the building inspector.

Pittsburgh, Pa.—Brick buildings, 626. Frame buildings, 646. School buildings, 3. Total cost \$3,030,429. Total cost 1882, \$2,294,750; 1883, \$2,825,042; 1884, \$3,361,990.

Portland, Ore.—Brick business buildings, 13; cost \$446,500. Frame dwellings, 83; cost \$389,500. Miscellaneous buildings, 9; cost \$128,000. Total \$964,000. Total 1884, \$1,683,600. East Portland, \$341,700. Grand total 1884, \$2,025,300.

Providence, R. I.—Brick residence, 1; cost \$10,000. Frame dwellings, 380; cost \$1,196,750. Brick business buildings, 5; cost \$109,000. 1 brick police station, cost \$25,000; 1 brick church, cost \$30,000. 1 brick and stone club house, cost \$75,000. 1 brick theater, cost \$30,000. 1 brick mill, cost \$75,000. Additions and alterations cost \$209,005. Miscellaneous buildings, cost \$178,495. Total cost \$1,938,450.

Richmond, Ind.—Brick residences, 47; cost \$88,550. Frame dwellings, 68; cost \$51,750. Total 115 buildings, cost \$140,300.

Rockford, Ill.—A table prepared by the *Register* places the amount expended in building during 1885 at \$485,715.

Rushville, Ill.—Building improvements during 1885 cost \$50,000, against \$100,000 during each for the past three years.

San Francisco, Cal.—Frame buildings, 1,182; cost \$4,562,914. Brick buildings, 39; cost \$1,972,600. Alterations, 237; cost \$608,485. Total cost, \$7,143,999. Total 1884, \$6,202,807.

Sioux City, Iowa.—Brick residences, 11; cost \$46,000. Frame dwellings, 373; cost \$321,143. Brick business buildings, 60; cost \$138,600. Brick and stone business buildings, 2; cost \$14,000. Brick business buildings improved, 27; cost \$72,000. Miscellaneous buildings new, 26; improved, 7; cost \$208,000. Additions and improvements in brick residences; cost \$44,000. Total cost \$843,743. Not including city or railroad work. Total 1884, \$980,000.

Sioux Falls, Dak.—Building improvements during 1885 cost \$352,400.

South Bend, Ind.—Brick residences, 9; cost \$46,000. Brick and stone residence, 1; cost \$7,000. Frame dwellings, 50; cost \$50,000. Brick business buildings, 10; cost \$50,000. Brick and stone business building, 1; cost \$100,000. Miscellaneous buildings; cost \$25,000. Total 70 buildings; cost \$278,000. Total 1884 \$298,2200.

St. Joseph, Mich.—Building improvements during 1885 cost \$124,259.

St. Joseph, Mo.—Brick residences, 30; cost \$310,800. Brick and stone residences, 4; cost \$110,000. Frame dwellings, 200; cost \$150,000. Brick and stone business buildings, 10; cost \$146,000. Miscellaneous buildings, 28; cost \$272,000. Total 272 buildings; cost \$988,800. Sewers laid by the city during the year; cost \$15,000.

St. Louis, Mo.—Brick residences, 1,349; cost \$4,059,631. Brick and stone residences, 21; cost \$132,325. Frame dwellings, 337; cost \$307,557. Brick business buildings, 31; cost \$140,556. Miscellaneous buildings, 706; cost \$1,226,751. Total 2,484 buildings; cost \$5,866,810. Total 1884, \$6,764,791.

St. Paul, Minn.—Residences, 2,514; cost \$4,363,000. Frame business buildings, 188; cost \$309,100. Brick and stone business buildings, 193; cost \$1,550,300. Miscellaneous buildings, 612; cost \$2,881,300. Total 3,507 buildings; cost \$9,103,700. Total for 1884, 2,383 buildings; cost \$7,266,477. The amount expended on new bridges during 1885 was \$421,900. New sewer built in 1885, 19-7 miles. In 1884, 4½ miles. Total amount expended on public works, \$1,500,000 in 1885; \$1,200,000 in 1884. Total amount expended in water-works department in 1885, \$522,971; in 1884, \$900,902.

Streator, Ill.—Brick residence, 1; cost \$1,500. City Hall; cost \$12,000. Frame dwellings, 300; cost \$82,500. Brick business buildings, 5; cost \$47,000. Stone church; cost \$6,500. Miscellaneous building, 1; cost \$1,500. Total 309 buildings; cost \$151,000. Total 1884, \$179,000.

Syracuse, N. Y.—Dwellings, 326; cost \$884,850. Business buildings, 19; cost \$57,250. Expended on superstructure of Government building, \$111,550. Miscellaneous buildings, additions, alterations, etc.; cost \$260,140. Total \$1,313,790. Total for 1884 cost \$1,706,890. Not included in above is \$351,330, expended in suburban building.

Terre Haute, Ind.—Brick residences, 10; cost \$17,825. Frame business buildings, 9; cost \$7,600. Frame dwellings, 76; cost \$50,635. Brick business buildings, 16; cost \$19,800. Miscellaneous buildings (including two churches), 35; cost \$23,655. Total, 146 buildings; cost \$119,515. Above is from building permits issued. Permits were only taken out for about two-thirds of the buildings erected. Total 1884, \$303,206.

Toledo, Ohio.—Brick buildings, 163; cost \$450,619. Frame buildings, 580; cost \$434,580. Miscellaneous buildings, including amount expended on the new postoffice and custom house, the soldiers' memorial building, and the manual training school, built by the city, cost \$140,000. Total cost \$1,025,199. Total 1884, \$2,083,531.

Tower, Dak.—Residences, cost \$8,200. Business buildings and miscellaneous improvements, cost \$23,400. Buildings of public nature, cost \$7,100. Total cost \$42,280.

West Point, Dak.—Building improvements during 1885 cost \$134,159.

Synopsis of Building News.

Albert Lea, Minn.—Architects C. G. Maybury & Son, of Winona, Minn., report: For Gulbrandsen Bros., two-story brick store building, 45 by 100 feet; cost \$7,000; under way. For G. Gulbrandsen two-story frame dwelling, 42 by 52 feet; cost \$4,000; projected.

Architects Hodgson & Stem, of St. Paul, Minn., report: Brick and stone court house; cost \$45,000.

Atchison, Kan.—Architect W. Angelo Powell, of St. Joseph, Mo., reports: For John McIntire, four-story and basement brick business block, 72 by 100 feet, stone front, tin roof; cost \$16,800; under way.

Atlanta, Ga.—Architects Bruce & Morgan report: For Christian Church congregation, new brick front to present church building; cost \$6,000; under way; D. D. Snyder, contractor. For Mrs. E. C. Durant, two-story dwelling; cost \$2,500; taking bids.

Attica, Ind.—Architect Geo. S. Spohr, of Chicago, Ill., reports: For Mrs. P. Collins, stone and wood residence, 40 by 60 feet; cost \$15,000.

Bloomington, Ind.—Architect J. L. Nichols reports: For N. B. Rogers, two-story frame livery stable, 60 by 130 feet; cost \$3,000; just contracted; also two smaller jobs; outlook not flattering.

Buffalo, N. Y.—Architects Swan & Falkner report: For H. Wells, two-story half brick and frame residence on Niagara street; cost \$9,000; Joseph Metz, builder. For Irving Kester, two-story half brick and frame residence on North street; cost \$8,000; Schneider & Kraft, builders. For J. W. Crafts, two-story frame residence on Linwood avenue; cost \$8,500; Joseph Metz, builder. For E. H. Webster, brick and frame residence on Prospect avenue; cost \$7,000; Schneider & Kraft, builders. For W. E. Morgan, frame residence on Hodge avenue; cost \$4,000; Joseph Metz, builder. For James Stewart, frame residence on Seventh street; cost \$5,000; William Henrich, builder. For S. Koopmans, frame residence on Niagara street; cost \$5,500; Joseph Metz, builder. For Henry Brown, frame residence on Niagara street; cost \$5,500; F. Scott, builder. For L. W. Simpson, frame residence on Richmond avenue; cost \$4,000; Dean & Spring, builders. For H. Loomis, frame residence on Richmond avenue; cost \$3,500; Joseph Metz, builder.

Architect F. W. Calkins reports: For James H. Smith, two-story frame residence on Ferry street; cost \$11,000; Joseph Metz, builder.

Architects M. E. Beebe & Son report: That contracts have been awarded, but work will not be begun before the first of May next, for the John C. Jewett Manufacturing Company's new building. The contract for the mason, iron and custone work was awarded to Charles Berrick; and for carpenter work, plumbing, painting and glazing to John Feist. It will be 93 feet front by 144 feet deep, and five stories high. It is estimated to cost \$50,000.

Cadillac, Mich.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For Austin Mitchell, dwelling; cost \$3,000; contract not yet let.

Canon City, Col.—Mr. J. P. DeWoody and Mr. Stubbins, of New York, will move the St. Cloud Hotel from Silver Cliff to this place. The building is of brick and stone and handsomely finished. It was erected at Silver Cliff three years ago, at a cost of \$28,000. The estimated cost of moving and rebuilding is from \$12,000 to \$16,000. The County Court House, which was erected in Canon City in 1881-82, at a cost of \$30,000, has been condemned, and has to be taken down and rebuilt. The cause is not the construction, but that the foundation was laid on loose, spongy ground, which keeps giving. Prospect for next season, good.

Architect Geo. W. Roe reports: County Poor House, main building and wings, main building 36 by 36 feet, two stories; east and west wings 55 feet with "L" 40 feet, one-story high; size over all, 146 feet front, 4 feet depth; to be built of brick; tin roof; cost, about \$10,000. Plans on file at Court House. For Andros Johnson, brick dwelling, 32 by 32 feet, tin roof; cost \$2,000; under way; S. Bond, builder. For James Adams, eleven-room brick and stone residence, 40 by 40 feet; cost, about \$4,000; projected. The Hot Springs Hotel, previously reported, 120 by 62 feet, cost \$10,000, is nearly inclosed. County bridge across the Arkansas river, to be built after the Pratt system, 20 by 80 feet, cost \$1,200, is projected.

Carroll City, Iowa.—Very little building going on, but outlook is good.

Architect S. P. Hart reports: Two-story and basement brick and stone building, 30 by 100 feet, for J. E. Griffith; cost \$8,000.

Chicago.—The prospect for a year of unprecedented activity in building is now almost a certainty. The building material market is steady with a slight upward tendency. Most of the city building is in the "projected" stage, but active preparations are being made for early spring work.

Architect Geo. S. Spohr reports: For S. Wallace, three-story and basement brick, 25 by 80 feet, corner of State and Forty-second street; cost \$10,000. For A. C. Weaner Estate, additional story, 25 by 70 feet, to brick building, 48 Eldridge court; cost \$2,500. For Henry Kost, three-story and cellar, brick, 24 by 60 feet. Forty-second street and Wabash avenue; cost \$7,000. For Mrs. A. Miller, three-story and cellar, brick, 25 by 72 feet, 582 Sedgwick street; cost \$8,000. For Mrs. H. Frese, three-story and cellar, brick, 25 by 58 feet; 441 Dayton street, cost \$6,000. For Mrs. M. Schuler, three-story and cellar, brick, 25 by 58 feet, on Sedgwick street, near North avenue; cost \$4,800. For John Sullivan, three-story store and flats, 24 by 70 feet, corner of Wells and Whiting streets; cost \$8,000.

Architect J. W. Ackerman reports: For John Gaynor, three-story, attic and cellar, residence, 30 by 98 feet, brick and Hummelstone (Pa.) brownstone front; interior finished in hardwood and heated by steam; cost, including barn, \$28,000; not let. For the same owner, two residences on Sangamon street, two stories and cellar, 40 by 57 feet, Anderson pressed brick, limestone trimmings; cost \$6,000. For the same owner, two residences on Congress, near Sangamon, three stories and cellar, 42 by 65 feet, pressed brick, limestone trimmings; cost \$7,500. For Z. Davidson, on 59 Wilson street, three-story store building, 25 by 80 feet, flats above, Anderson pressed brick front, limestone trimmings; cost \$8,000; Napoleon Provost, contractor.

Architect Alfred Smith reports: For A. E. Kent, three-story and basement barn, Anderson pressed brick front, 75 by 100 feet; cost \$25,000.

Architect C. C. Miller reports: For P. F. Flood, on corner of Monroe and Sangamon streets, flat building, three stories, 24 by 62 feet, pressed brick, stone trimmings; cost \$8,500. For P. H. Dyrenforth, residence at Lake View, frame, French chateau style, 34 by 60 feet, two stories; cost \$6,000.

Crawfordsville, Ind.—Architect E. H. Ketcham of Indianapolis reports: One-story brick church building, 74 by 102 feet, pressed brick with stone trimmings; cost \$20,000; under way.

Cincinnati, O.—There is no change since last report. The winter continues more or less open, and is quickly taken advantage of by all the contractors. There are several new and imposing buildings soon to be erected which will add greatly to the beauty of our city. Cincinnati is making encouraging strides forward architecturally, more attention being paid to ornamental details, which add but little to the cost, but much, when judiciously and artistically arranged, to the "tout ensemble" of the structure. Among the prominent new edifices to be erected, and reflecting credit upon the architect, are the "Citizens' Bank and Paxton Warrington building," built jointly, and the Second Nat. Bank building, both designed by the same architect. In my next I will mention his name, combined with a full description of the buildings. The contracts for both will be closed in about two weeks, which explains my silence.

Architect Samuel Hannaford has enlarged and refitted his office and it is now one of the cosiest and best arranged in our city. He reports the following: For Alms and Doepeke, a six-story brick warehouse, 50 by 150 feet, with tin roof; contracts not let. College Hill Town Hall, College Hill, Ohio, a brick building of irregular shape and size; cost \$15,000. For John E. Bell, a six-story brick store building, with freestone trimmings, size 45 by 130 feet; cost \$2,500. For Jos. Jones, Esq., a residence of brick with 9 rooms, pine finish, slate roof and costing \$8,000. Remodeling building for stores and flats for Jno. W. Ellis, Esq., of New York City; drawings in preparation; time well occupied.

Architect H. E. Siter, "Lincoln's Inn Court," has his time well occupied.

Architect G. W. Drach reports as follows: Residence for Chas. Weber, Esq., built of frame, 24 stories, and containing to rooms, hardwood finish, etc., and slate roof; cost \$10,000; also a brick stable costing \$2,000. For Mrs. Mary Flannery, a frame house of 9 rooms, pine finish, slate roof; cost \$3,500. For Miss Adile Andres, a frame residence of 8 rooms, pine finish and slate roof; cost \$4,000. For Henry Brinkmeyer, a residence built as follows: First story weatherboarded, second story cypress shingles, with cement gables and slate roof; cost \$5,000.

Architect G. W. Rapp reports the following: Remodeling and rebuilding University

building, which was destroyed by fire; cost \$8,500. Hospital building for "The Poor of St. Francis" at Lick Run, city; irregular in shape with a center building, 40 by 150 feet, connected with two wings, each 40 by 108 feet. The Chapel is in the center of the main building, which has iron stairs throughout. It is a brick building, 3 stories high, with freestone trimmings, and has a capacity of 200 patients. There is also a boiler-house and stable connected in the group; total cost \$125,000.

Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For Farren Schubert, six dwellings; cost \$18,000.

Cleveland, Ohio.—Outlook for building is good.

Architect A. M. Smith reports: For P. McArthur, four tenement houses, 26 by 56 feet each; cost \$10,000; under way. For G. J. Jones, M.D., two tenement houses, 27 by 54 feet; cost \$6,000; plan ready; Simmons & Waldon, masons; Kelly & Richards, carpenters. Also considerable repair work under way.

Columbus, Ohio.—The outlook for 1886 is good. There will be but slight advance in prices of material, about 10 per cent in early work.

Architects Terrell & Morris report: For C. D. Firestone, two-story pressed brick building, 50 by 84 feet, brownstone trimmings, tile roof, cost \$30,000; under way. For F. E. Powell, two-story buff and brownstone building 40 by 60 feet, tile roof; cost \$15,000. Plans on the boards for D. T. Nichertgen, pressed brick and brownstone building, 30 by 48 feet, slate roof; cost \$9,000; under way. For S. Butler, two-story brick and frame, 28 by 40 feet, slate roof; cost \$5,500; under way. For T. H. Ricketts, two-story beick, slate roof, 30 by 44 feet; cost \$5,000; under way. For D. K. Watson, two-story brick, 28 by 36 feet, slate roof; under way. For A. A. Gibson, two-story pressed brick, 36 by 40 feet, slate roof; cost \$7,000; under way. For J. W. King estate, six-story and basement bank building, 25 by 100 feet, American method of fireproof construction, brownstone front; cost \$40,000; receiving bids.

Davenport, Ia.—Very little new work projected as yet. Two office buildings are talked of, the erection of which is uncertain.

Architect E. S. Hammatt reports: Griswold College gymnasium, one-story, pressed brick veneer building, 71 by 31 feet; cost \$5,000; plans nearly finished.

Des Moines, Ia.—But little can be said of what may be done here this year. There seems to be a general feeling that there will be a good deal of building.

Architects Josselyn & Taylor report: For Geo. Booth, one-and-one-half story frame cottage, 28 by 38 feet; under way; L. A. Stoneroad, builder.

Architect W. L. Plack reports: For M. Lawritsen, three-story brick business block, 40 by 110 feet, pressed brick and custone front, steam heating; cost \$17,000; projected. For Percival & Hutton, two-story brick and stone business block, 22 by 75 feet; cost \$4,000; projected. For Frank Thornton, two-story frame residence, 28 by 42 feet; cost \$3,000; projected. For Chas. Kohler, remodeling business block, 22 feet front; cost \$22,000; projected. For S. J. Stover, story and a half frame cottage, 26 by 46 feet; cost \$2,500.

Detroit, Mich.—The outlook for building is quite flattering, though it is de vel oping only moderately at present.

Permits were issued during January for new buildings to cost \$163,425; for alterations, etc., \$5,800. Total, \$169,225.

Architect H. H. Richardson, of Brookline, Massachusetts: For the Bagley estate will erect a handsome building on Congress between Randolph and Bates streets, for the Light Infantry armory, which will be extremely convenient; size, 120 by 75 feet and 68 feet high. The front is designed with three large arched openings 18 feet wide and 44 feet high, with a gable over each above, in which will be carved stone panels of tasty design, the center gable containing the words "Light Infantry Armory." Vossours of arches will be 4 feet and the sockets 16 inches deep.

The front will be of brick and portage entry sandstone, surmounted with stone molded coping. The first-story front is composed of plate glass show windows between iron columns. Above these windows will be broad lintels of stone. In the second-story, stone columns with handsomely carved caps. In the front of third-story are large semi-circular windows fitted with wooden mullions and transoms. There will be three storcs, two 22 by 120 feet and one 25½ by 120 feet, each with nice light basement same size. The second floor will be reached by a flight of stairs at the west end of the building, where, from a long hall, open off ladies' parlor, 16 by 32 feet, off from which is a toilet room, 14 by 9½ feet. Right back of this are two parlors, 22 by 32 feet, one will probably be gentlemen's parlor, the other billiard room. There will also be off this corridor two headquarters' rooms, 46 by 35 feet, capable of being thrown together, and next to these, reached by double doors from the corridor, will be the dining-room, 44 by 33 feet, and adjacent thereto, the kitchen and porter's room, 23 by 25 feet. From corridor, stairs lead to the third floor, which is the side room, 75 by 120 feet in size. The roof is semi-circular, making room in center, 32 feet high. It is well lighted, having skylights in addition to large windows in front and rear walls. At one end of room will be a band stand, 10 by 20 feet. The basement is 10 feet high, the first story 14 feet, and second story, 11 feet. The floors are to be "mill floors of show burning construction." The whole building will be heated by steam. The contractor's are: for the masonry and iron work, Alex. Chapoton, Jr.; carpentry, Underwood, Armstrong & Son; plumbing, Lane Bros.

Architect A. C. Varney reports: For Fred Simmons, two-story brick dwelling, 35 by 62 feet, stone trimmings, gravel roof; cost \$3,500; Thos. Golden, builder. For A. W. Clark, two-story brick dwelling, 32 by 65 feet, stone trimmings, slate roof; cost \$8,000; Vivier & Son, masons; Lloyd & Fluegel, carpenters.

Architects Mason & Rice report: For T. H. Roberts, three-story brick dwelling, 26 by 90 feet, gravel roof; cost \$7,500.

Architect Mortimer L. Smith reports: For Mr. Hall, three-story brick dwelling, 25 by 66 feet slate roof; cost \$6,000; under way; Vinton & Turk, builders.

Architects J. V. Smith & Son report: For James Clancy, two-story brick dwelling, 22 by 60 feet; cost \$3,000.

Architect Peter Dederichs, Jr. reports: For N. Christa, block of two, two-story brick stores, 54 by 55 feet, stone trimmings; cost \$7,000; projected. For A. Krug, one-story store building, 27 by 60 feet, brick and stone trimmings; cost \$4,000.

Architects J. V. Smith & Son report: For Chas. Leahy, two-story brick dwelling, 26 by 64 feet, stone trimmings, gravel roof; cost \$3,000; Allen Williamson, builder. For V. P. Bayley, two-story dwelling, 32 by 90 feet, brick, stone trimmings, slate and tin roof; also barn, 25 by 40 feet; cost \$8,000; projected. For James Atkinson, three-story brick office building, 44 by 49 feet; with dancing hall, stone trimmings, gravel roof; cost \$5,000; projected. For Hugh Currie, three-story brick store building, 41 by 100 feet, stone trimmings, tin roof; cost not estimated; projected.

Mr. John Guton is building several one-story frame cottages, each 20 by 42 feet; cost \$5,600.

Elkhart, Ind.—Present condition and outlook for building is fair.

Architects N. Weaver & Son report: For L. Chamberlain, two-story brick store building, 38 feet 6 inches by 70 feet, iron and stone front, tin roof, metal cornices; cost \$4,000; projected; Wm. Barger, builder. For Old Peoples' Mutual Insurance Co., one story brick office building, 85 by 85 feet, metal cornices; cost \$6,000; projected. For Dr. F. C. Eckleman, two-story office and rooms, 25 by 60 feet; cost \$4,000; under way. For R. K. Mann, two-story frame cottage; cost \$3,000; projected. For Henry C. Dodge, brick residence; cost \$15,000; under way. For Elkhart County, brick asylum for the poor; steam heating; cost \$20,000; projected.

Emporia, Kan.—Present condition and outlook fair.

Architect C. W. Squires, reports: For G. W. Newman & Co., remodeling and new front to brick store building, 50 by 130 feet; cost \$7,000; under way; E. F. Sprenger, builder. For J. A. Stevens, brick and stone store and opera house block, 50 by 116 feet; cost \$20,000; under way. For J. P. Wiser, Rancho House, stone building, 54 by 67 feet; cost \$6,000; projected. For H. F. Kalkoff, stone residence, 48 by 64 feet; cost \$18,000; under way. For E. A. Hildebrand, brick and stone store building, 50 by 100 feet; cost \$10,000; under way. For E. A. Buckley, frame dwelling, 28 by 48 feet; cost \$2,000; under way.

Emporium, Pa.—Architect I. C. Wykoff, of Keokuk, Ia., reports: Warner Hotel, three-story brick veneered building, 90 by 35 feet; seventy-five rooms.

Fargo, Dak.—Architect F. G. Corser, of Minneapolis, Minn., reports: For the Daily Argus, brick block to cost \$28,000.

Fort Wayne, Ind.—Architect Peter Dederichs, Jr., of Detroit, Mich., reports: For Roman Catholic Society, Roman style brick and stone church building, 80 by 120 feet; two towers, each 140 feet high; three naves; middle one 48 feet and side ones 32 feet high; seating capacity 700; work will be commenced about March 1; cost of building, \$25,000.

Frankfort, Ind.—Outlook for season is good.

Architect J. W. Hammond reports: For Hon. James V. Kent, two-story frame dwelling, 35 by 50 feet; cost \$3,500; plans completed. For Will. Klein, two-story frame dwelling; cost \$2,500; plans completed. For James Collins, one and one-half story cottage, 28 by 35 feet; plans on the boards.

Frehold, N. J.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For J. Clarence Cononer, frame dwelling, 32 by 51 feet; cost \$3,500; projected.

Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For R. T. McDonald, frame dwelling, 36 by 58 feet; cost \$6,000; projected.

Grand Rapids, Mich.—Architect Sidney J. Osgood reports: For Wm. Widcomb, pressed brick and stone building; cost \$150,000; contract for foundation let. The Union Benevolent Home will soon be completed; cost \$40,000. Work completed on Westminster Presbyterian Church; cost \$35,000. The following work has come into hand since November 1: For Mr. Holt, frame dwelling; cost \$2,500; Wm. Alger, builder. For Mr. Sullivan, dwelling; cost \$2,500; Wm. Alger, builder. For Mr. Agnew, dwelling; cost \$3,000; Howe & Driscoll, builders. For Mr. Yerex, dwelling; cost \$3,000; Howe & Driscoll, builders. For S. P. Bennett, dwelling; cost \$5,500; contract just let. For Mr. Netson, dwelling; cost \$2,000. For Rev. Bocher, residence; cost \$10,000. Besides numerous jobs outside of Grand Rapids.

The contract for the erection of the Michigan Soldiers' Home has been awarded to Charles Tiedke, of Saginaw, Mich.

Green Bay, Wis.—Outlook for Spring season is favorable.

D. M. Harteau reports; for T. Van Henreck, two-story brick store building, 26 by 90 feet; cost \$3,500; projected. Also several less important jobs.

Hermose, Ill.—Architect Geo. S. Spohr, of Chicago, reports; forty cottages, to cost \$40,000; and four stores to cost \$15,000, for Thomas Roth.

Hamilton, Ohio.—Architect Max Reuti reports; for Charles Heiser, block of four frame dwellings, 100 by 60 feet, with store at corner; cost about \$6,800; projected. For Christ Benninghofen, three-story stores and flats; stores 36 by 75 feet; flats 36 by 45 feet; first story of iron construction; second and third stories pressed brick with stone and terra-cotta trimmings; steam heating throughout; cost about \$12,000; projected.

Hot Springs, Neb.—Architect G. G. Baldwin, of Sioux City, Ia., reports: For the Hot Springs Hotel Co., three-story frame hotel building, 48 by 152 feet; steam heat; cost \$12,000; under way; E. C. Wakefield, builder.

Howard, Wis.—Architect D. M. Harteau, of Green Bay, Wis., reports: For T. Finnegan, two-story brick dwelling, 42 by 57 feet; cost \$2,500; projected. Also remodeling residence of Capt. Cusic at Fort Howard.

Ishpeming, Mich.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For S. W. Hayden, dwelling; cost \$3,000; contract not yet let.

Jamestown, Dak.—Architect H. W. Jones, of Minneapolis, Minn., reports: For W. M. Floyd, brick and stone double store building, 80 by 80 feet; cost \$10,000.

Kansas City, Mo.—Architect Kimball, of Minneapolis, Minn., reports: For H. D. Ashley, two and one-half story frame dwelling, 45 by 60 feet; cost \$7,000.

Keokuk, Ia.—Architect I. C. Wykoff reports: For Keokuk Stone Works, warehouse 43 by 140 feet; cost \$6,000; projected. A four-story hotel building is also projected but no particulars yet given.

Kalamazoo, Mich.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For F. E. McGurrin, frame dwelling, 28 by 46 feet; cost \$2,000; projected.

Kankakee, Ill.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For Arthur Swannell, frame dwelling; 32 by 47 feet; cost \$2,000; under way. Add Kansas City, Mo.

Architect Geo. Carman reports: For S. S. Dickinson, two-story brick, stone and terra-cotta, slate roof, 38 by 55 feet; cost \$10,000; under way. For N. P. Simonck, two-story brick and stone, 42 by 50 feet; cost \$7,000; nearly completed; W. B. McLain, builder. For John Gray, two-story brick and stone, slate roof, 40 by 60 feet; cost \$15,000; under way. Swedish parsonage, two-story and basement, brick, slate roof, 20 by 55 feet; cost \$4,000; foundation in. For W. W. Perkins, two-story brick and stone, slate roof, 35 by 52 feet; cost \$7,500; under way.

Lake View, Ill.—Architect Joseph L. Silsbee, of Chicago, reports: For R. A. Walker, two-story and basement dwelling, 30 by 50 feet; first story of brick, second story frame.

Architect Geo. S. Spohr, Chicago, reports: For Henry Strassheim, addition and alterations to residence on Roscoe street; cost \$3,000.

La Crosse, Wis.—Architects C. G. Maybury & Son, of Winona, Minn., report: For M. E. Church Society, brick church building, 60 by 120 feet; cost \$14,000; under way.

Little Rock, Ark.—No new buildings in project and present condition is very quiet. The State Blind and Mute Asylums are nearing completion.

Architects Harding & Bailey report: For State of Arkansas, remodeling two-story building, 192 by 160 feet; cost \$30,000. State Lunatic Asylum, four-story brick additions; cost \$58,000. Clark & Co., contractors, Lonoke Court House, two-story brick building, 40 by 84 feet; cost \$14,000. Sterrett & Co., contractors. For J. B. Spears, two-story brick building, 50 by 90 feet; cost \$8,000. For W. E. Woodruff, two-story frame, 44 by 54 feet; cost \$3,500. All the above work is nearly completed.

Logansport, Ind.—At present building matters are at a stand still; but outlook is good for spring season.

Architects Crain & Krusch report: For city of Logansport, brick and stone City Cemetery vault, 16 by 32 feet; cost \$1,200; contract not yet let. For H. Brookmeyer, Sr., brick and stone residence, 18 by 56 feet, slate roof; cost \$3,000. W. J. Lewis, builder. Also two smaller jobs projected.

Louisville, Ky.—Architect C. A. Curtin reports: Residence for Judge Jackson; cost \$8,000. Residence for J. D. McCanby; cost \$12,000.

Architect D. X. Murphy reports: Opera House building with stores, offices, etc.; cost \$50,000.

Architect C. J. Clarke reports: Store building for W. H. McKnight & Co.; cost \$30,000. Residence for Mr. Owens; cost \$25,000.

Architect Mason Maury reports: For Henning & Son, office building; cost \$60,000. For Judge Huston, residence; cost \$15,000. For H. M. Smith, residence; cost \$16,000.

Architect O. C. Wehle reports: For G. E. Curie & Co., warehouse; cost \$15,000. For M. Sellinger, residence; cost \$14,000. For Captain P. Varble, residence; cost \$7,000. For W. C. Garland, two cottages; cost \$4,000.

Marshalltown, Ia.—Building at present is very dull; outlook rather better than last year.

Architect J. G. Weatherly reports: For Chas. Eckles, two-story frame, 46 by 54 feet, slate roof; cost \$4,000; plans about completed.

Marietta, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: Four two-story cottages; cost \$8,000; receiving bids.

Minneapolis, Minn.—Architect Kimball reports: For T. D. Skiles, block of six three-story brick stores, 132 by 50 feet, on corner Western avenue and Thirteenth avenue South; cost \$25,000. For Lewis Laramie, three-story frame dwelling house, 40 by 60 feet, on Highland avenue; cost \$8,000. Just completed the Central Park Terrace, 140 feet on Spruce and Willow streets and 180 on Grant street, 60 feet deep, three stories high above basement, for Gates Bros. Building is veneered with Dresbach blue and buff sandstone, and interior finished in Georgia pine; cost \$150,000.

Architects Haley & Allen report: For John Travis, six-story brick block, 77 by 92½ feet, on Fourth street, between Hennepin and First avenues North, with all modern improvements; cost \$35,000.

Architect W. A. Hunt reports: For F. J. Collom, at North Minneapolis, two-story brick building, 45 by 90 feet, comprising three stores and thirteen tenement suites of seven rooms each; cost \$8,000.

Architect A. L. Dorr reports: For S. H. Baker, two-and-one-half-story, pressed brick and stone veneered dwelling, 40 by 67 feet, with hardwood finish and steam heating, on corner of Seventeenth avenue and Spruce place; cost \$16,000. Also barn; cost \$2,000.

Architect W. H. Dennis reports: For S. P. Channell, brick and stone residence on the bluff, back of the Lowry residence; cost \$45,000. For J. B. Bushnell, brick veneered residence, on corner Hennepin and Franklin avenues; cost \$5,000. For H. L. Gordon, five-story brick block, with cutstone front, on Fifth street, between Nicollet and Hennepin avenues; cost \$30,000.

Architect W. C. Whitney reports: For G. A. Morse, frame dwelling on corner of Twenty-fourth street and Chicago avenue; cost \$5,000.

Moline, Ill.—Architect E. S. Hammatt, of Davenport, Iowa, reports: For E. H. Sleight, two-story frame residence; cost \$7,000; roof on; J. M. Craig, builder.

Montgomery, Ala.—Architect H. Wolters, of Louisville, Ky., reports: Depot for L. & N. R. R., to cost \$50,000.

Mount Airy, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: For Judge J. L. Hopkins, summer residence; cost \$2,000; contract not yet let.

Manistee, Mich.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For the Unitarian Society a church building to cost \$10,000; projected; contract not yet let.

Medina, Ohio.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For W. B. Croft, M.D., frame dwelling 38 by 50 feet; cost \$4,000; under way.

Muskegon, Mich.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For J. W. Moore, summer cottage at Bay View, 30 by 42 feet; cost \$2,500; projected.

Nashua, N. H.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For C. W. Greenwood, frame dwelling, 37 by 68 feet; cost \$3,500; projected.

Nashville, Tenn.—While the present condition and outlook is not good, it is better than at this time last year.

Architect Geo. W. Thompson reports: For Isaac T. Rhea, two-story brick, 46 by 66 feet, stone and terra-cotta trimmings, steam heating; cost \$7,500; under way; J. F. Bowers & Bro., builders. For G. Lieberman, two-story brick, 38 by 72 feet, slate roof, steam heating; cost \$9,600; under way; roof on; Simmons & Phillips, builders. For Mrs. M. Hart, two-story brick, 48 by 60 feet, slate roof, steam heating; cost \$7,200; under contract; not yet commenced; F. Watterson, builder. For J. S. Reeves, two-story brick, 38 by 76 feet, tin roof, steam heating; cost \$6,500; under contract; not yet commenced; Robertson & Bro., builders. For Judge T. F. Cooper, two-story brick, 42 by 60 feet, tin roof, steam heating; cost \$6,000; taking bids. For W. E. Norville, two-story brick, 44 by 66 feet, tin roof; cost about \$5,000; plans on the boards. For Mrs. W. Perry, two-story brick, 54 by 74 feet, slate roof, steam heating; cost about \$8,000; plans on the boards.

Normal Park, Ill.—Architect Geo. S. Spohr, of Chicago, reports: For H. Reimers, frame dwelling, 30 by 40 feet; cost \$5,000.

Onancock, Va.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: For C. L. Harmanson, M.D., frame dwelling, 40 by 50 feet; cost \$3,000; projected.

Oconto, Wis.—Architect D. M. Harteau, of Green Bay, Wis., reports: Catholic school building and sisters' residence, two-story brick veneer building, 57 by 57 feet; cost \$4,000; projected.

Ogallala, Neb.—Architect N. A. Sherman, of York, Neb., reports: For L. A. Brandhoeffer, two-story brick-veneer dwelling, 34 by 46 feet; cost \$3,500; projected.

Ottumwa, Iowa.—Architect Edward Clark; for A. C. Leighton, remodeling business block, 40 by 44 feet, for postoffice; cost \$3,800; projected. Also less important work, aggregating \$4,000.

Peu Argyle, Pa.—Architects Allen & Coxhead, of Streator, Ill., report plans under way for the State Normal School building. It will be three stories and basement and attic, 150 by 187 feet, built of native granite, with slate roof. The assembly room will have a seating capacity of 1,000. The building is designed to accommodate 300 students, 13 professors, steward's family, servants, etc. It will be heated by steam, have hydraulic elevator, also stained glass; cost \$50,000.

Poneto, Neb.—Architect G. G. Baldwin, of Sioux City, Iowa, reports: For J. B. Saulpaugh, three-story brick hotel, building 42 by 82 feet, tin roof; cost \$8,000; projected.

Quincy, Ill.—Architect S. M. Randolph, of Chicago, has been appointed architect of the Illinois Soldiers' and Sailors' Home. Legislature last winter appropriated \$200,000, \$100,000 of which was to be invested in land. Have secured 140 acres of land near Quincy, adjoining town site.

Architect J. L. Silsbee, of Chicago, reports: For Wm. B. Bull, two-story residence, 30 by 60 feet; first story brick, second story stone. For W. S. Warfield, two-story and attic residence, 50 by 75 feet; to be built of Kasota stone.

Ravenswood, Ill.—Architect Geo. S. Spohr, of Chicago, reports: For A. Smith, frame dwelling, 38 by 40 feet; cost \$4,000.

Richmond, Ind.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: First Presbyterian church building to cost \$35,000; contract let to Roberts & Co., January 20.

River Point, R. I.—Architect D. S. Hopkins, of Grand Rapids, Mich., reports: Frame dwelling, 30 by 46 feet; cost \$3,000; under way.

Richfield, Minn.—Architect W. H. Dennis, of Minneapolis, Minn., reports: A brick-veneer residence; cost \$5,000.

Rock Island, Ill.—Mr. E. S. Hammatt, of Davenport, Iowa, is architect, and Mr. L. G. Halberg, of Chicago, consulting architect, for the Augustine College. The building is to be three stories and basement in height, 178 by 74 feet, built of Le Claire stone. Contract for iron and tin work on roof just let to E. M. Spencer, of Rock Island.

Savannah, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: For Solomon Cohen, three-story brick tenement block, six houses; cost \$20,000; receiving bids.

Architects McDonald Bros., of Louisville, report: Jail building; cost \$60,000.

Sioux City, Iowa.—The outlook is very favorable, but most of the work projected is in dwellings.

Architect G. G. Baldwin reports: For John Dinnell, two-story frame dwelling, 36 by 62 feet; cost \$4,500; under way; C. K. Poor, builder. For O. J. Taylor, seven three-story brick tenements, 21 by 4 feet, each fitted with gas, water and steam; cost \$18,000; projected.

Architect James W. Martin reports: For C. C. Wales, two-story brick stores and flats, 40 by 82 feet, stone trimmings, plate glass store fronts; cost \$8,000; projected; John Beck, builder. For W. L. Wilkins, two-story and basement and attic frame residence, 47 by 47 feet, plate glass, hardwood interior finish; cost \$10,000; projected.

Springfield, Ill.—The building season is not yet opened up. Prospects for season, fair.

Architects Bullard & Bullard report plans on the boards for frame dwelling, 32 by 58 feet, for Wm. S. Fulinwidder; cost, about \$3,200.

Architect Geo. H. Helmle reports: St. John's Hospital, three-story brick and stone additions, 60 by 100 feet, including chapel; cost \$20,000; projected. Springfield Woolen Mills, two-story brick addition, 40 by 120 feet; cost \$70,000; projected. For Board of Education, two-story addition, 25 by 40 feet, to Palmer School building; cost \$5,000; projected. For Fred. D. Buck, remodeling store front; cost \$1,000; Buck & McKee, contractors. For C. Breckenridge, two-story, eight room frame dwelling; cost \$3,000; projected.

Springfield, Ohio.—Outlook somewhat more favorable as the spring season draws near. Present condition is improving.

Architect F. H. Penfield reports: For Rev. Wm. H. Warren, ten-room frame cottage; cost \$3,500; Springfield Planing Mill and Lumber Co., builders.

St. Paul, Minn.—Architects Brinckerhoff & Phillips report: For the Citizens' Union of Dayton Bluff, on Dayton's Bluff, an ice tower, 54 feet high and 23 feet square at base; also, toboggan slides, half a mile long; cost \$2,000.

Architect J. C. McCarthy reports: For Patrick Kelley, two-and-one-half story brick veneered dwelling, 40 by 60 feet on Commercial street; cost \$10,000.

Architect E. W. Ulric reports: For Hanover Brothers, remodeling store on corner of Jackson and 7th streets; cost \$3,500. For Richard Rolf, two-story frame residence of 10 rooms, on Park place; cost \$4,000. For Dr. Ohage, two-story brick dwelling of 12 rooms, on Bradley street; cost \$8,500.

Architect John M. Doherty reports: For C. A. Smith, two-story frame residence of 9 rooms, on corner of Dale and Marshall avenues; cost \$4,000. For Jacob Mathes, two-story frame residence of 10 rooms, 24 by 32 feet, on Burr street near Beaumont street; cost \$3,500. For Dowling and Ruse, row of three, three-story frame houses, 60 by 30 feet, on Bluff street; cost \$7,500. For Wm. Thompson, three-story brick store, 50 by 100 feet, on corner of Dakota avenue and Isabel street; cost \$18,000. For John Hurley, two-story frame residence, 23 by 33 feet, in West St. Paul; cost \$3,000. For Mr. Stodart, row of five three-story brick residences, 120 by 45 feet, on corner of Exchange and Chestnut streets; cost \$20,000. For Henry Survise, two-story brick dwelling, 80 by 80 feet, on corner of Collins street and LaFayette avenue; cost \$10,000.

Architects Hodgson & Stem report: For C. A. Zimmerman, at Rice Park, brick residence; cost \$5,000.

Architect C. A. Wallingford has in charge three triumphal arches for the Carnival association, situated respectively at the corner of 4th and Sibley streets, 7th and Minnesota streets and 3d and Cedar streets; cost \$6,000.

Architect H. Sackville Treherne reports: Young Girl's Home, on St. Paul street, three-story frame building, 45 by 60 feet; cost \$8,000.

Architect Kimball, of Minneapolis, Minn., reports: For J. J. Watson, block of brick stores; cost \$35,000.

Streator, Ill.—Prospects good for 1886, and a large amount of work will be commenced soon as the weather permits.

St. Louis, Mo.—Present condition of building is dull, on account of the weather; prospects of a fair legitimate business for Spring.

Architect T. B. Annan reports: For L. A. Moffett, two-story and finished attic dwelling, wood and brick, 40 by 40 feet; cost \$7,000; Pritchett & Moore, builders. For C. Carriere, two-story wood and brick dwelling, 36 by 40 feet; cost \$3,000; Focke & Wilkinson, builders. For Mrs. A. P. Lockwood, one and one-half story wood and brick dwelling, 32 by 40 feet; cost \$3,500; contract not let. For the Hall Estate, apartment houses, 80 by 70 feet; cost \$12,000; contract not yet let. All the above will be commenced as soon as the weather will permit; also have plans on the boards for chapel for M. E. Church, 40 by 70 feet; cost \$8,000.

Architect Thos. W. Brady reports: For H. O. Sullivan, three-story brick building, 24 by 65 feet; pressed brick front with stone trimmings; cost \$5,500; work will be commenced soon as weather permits; Joseph Flannery & Bro., builders.

Architects Ramsey & Swazey report: For Emile Koch, nine-room Queen Anne frame cottage, 36 by 40 feet; under way; sublet. For Anna Koch, nine room Eastlake frame cottage, 40 by 43 feet; cost \$5,000; plans on the boards. For Alfred Bevis, alterations and addition, 38 by 40 feet; pressed brick and brown stone; cost \$6,000; under way; sublet. For Jacob Straus Saddlery Co., store building; five stories; two stories iron, above that pressed brick with stone and terra-cotta trimmings, 60 by 135 feet; cost \$40,000; projected. For Edward Mallenkrodt, brick stable, 30 by 38 feet; cost about \$5,000; projected.

Architect John Beattie reports: For F. W. McManus, five-story brick store building, 26 by 105 feet, composition roof; cost \$16,000; nearly finished; E. C. Hoffman, builder. For J. K. Cook, two-story brick stable, 24 by 61 feet; slate roof; cost \$4,000; roof on; Reit & Allen, builders. For I. R. Triplet, two-story and attic brick dwelling, 42 by 64 feet; slate roof; cost about \$8,000; making plans; contract not let.

The more important building permits issued since December 1, are as follows: G Biston, two story brick dwelling; cost \$4,800; B. J. Goesse, architect; Goesse & Remmer, builders. L. M. Rumsey Manufacturing Co., two-story brick gas-pipe factory; cost \$3,000; Thomas Lowerly, builder. Coillier Estate, alterations to five-story brick store building; cost \$5,000; J. W. Gains, architect and contractor. Thos. Bray, two two-story brick tenements; cost \$3,500; Thos. Bray, architect and builder. A. Kuhr, three two-story brick stores and flats; cost \$6,000; P. Samonsien, builder. Felix Raeman, two-story brick dwelling; cost \$3,850; A. M. Barker, architect; Felix Raeman, builder. St. Louis Bank of Commerce, alterations in seven-story bank and office building; cost \$100,000; H. G. Isaacs, architect; Samuel M. Ross, builder.

Architect D. S. Hopkins of Grand Rapids, Mich., reports: For John Ringen, frame dwelling, 46 by 64 feet; cost \$6,000; projected.

Architect Geo. S. Spohr of Chicago, Ill., reports: Plans on the boards for two dwellings to be erected in St. Louis.

Stevens Point, Wis.—Architect D. S. Hopkins of Grand Rapids, Mich., reports: For W. W. Hazeltine, brick dwelling, 46 by 61 feet; cost \$5,000; projected.

St. Joseph, Mo.—Architect W. Angelo Powell reports: For T. H. Beekman, three-story brick residence, 49 by 51 feet; cost \$13,000; under way. For Geo. W. Mar-

low, two-story and basement brick residence, 48 by 49 feet, slate roof; cost \$12,000; under way. For Col. J. F. Tyler, two-story and basement brick residence, slate roof; cost \$6,500; under way. For J. Lysaght, two-story brick dwelling, 31 by 56 feet; cost \$3,000; projected. For Brittain & Co., five-story and basement, brick and stone business block, 63 by 136 feet; cost \$26,500; projected. For Mr. Washburn, two-story brick, 23 by 61 feet; cost \$3,000; projected. For Mr. Warfield, two-story brick, 38 by 63 feet; cost \$3,500; projected. For J. Lysaght, two-story and basement brick, 62 by 60 feet; cost \$6,000; projected. For P. Connor, two-story and basement brick, 39 by 61 feet; cost \$5,000; under way; J. Griffith, builder. For G. Hansen, two-story and basement frame, 28 by 56 feet; cost \$3,500; under way; J. Griffith, builder. For Mr. Schumacher, three-story brick store building, 21 by 70 feet; cost \$2,800; under way; J. Zimmer, builder. Two-story brick schoolhouse, 36 by 71 feet, slate roof; cost \$5,500; under way; J. Griffith, builder. Church building, brick, 43 by 55 feet; cost \$5,000; projected. For J. Hansen, two-story and basement brick residence, 29 by 60 feet; cost \$3,000; projected; J. Griffith, builder.

Sturgis, Mich.—Architect J. M. Bauaure reports: 'Work on Baptist Church, to cost \$6,000, is nearing completion. It is rumored that the M. E. Society of La Grange, Ind., 12 miles from Sturgis, will expend \$15,000, in a new building this year.

Waukesha, Wis.—Architect D. S. Hopkins of Grand Rapids, Mich., reports: For J. C. McCutchen, frame dwelling, 30 by 48 feet; cost \$3,500; projected.

West Bay City, Mich.—Present condition dull; outlook fair.

Architect D. P. Clark reports: small work, \$500 and upward; aggregating \$5,250.

West Point, Ga.—Architects Bruce & Morgan, of Atlanta, Ga., report: For Lafayette Lainer, two-story frame residence; cost \$5,000, under way; also, two one-story cottages; cost \$3,300, under way; work done by the day.

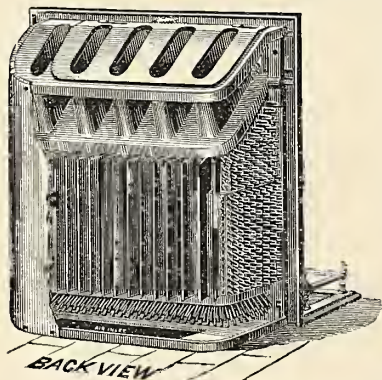
Wilmar, Minn.—Architects Haley & Allen, of Minneapolis, Minn., report: For School district, ten-room brick school house, 56 by 82-6 feet; cost \$15,000.

Winona, Minn.—Outlook for coming season is good, and it now looks as though more building would be done this year than there was last. Many fine residences are being finished, giving employment to first class workmen until season is open.

Architects C. G. Maybury & Son report: For German Lutheran Society, brick and stone church building, 57 by 132 feet; cost \$17,000; Munck & Lohse, contractors. For German Catholic society, brick convent building, 34 by 36 feet; cost \$3,000; Fred Kratz, contractor. For Jacob Story, three-story frame dwelling, 48 by 48 feet; cost \$4,500; under way; Henry Behrens, contractor. For R. E. Tease, two-story frame dwelling, 36 by 52 feet; cost \$3,200; under way; Grant & Noonan, builders. For A. Q. Slade, three-story brick store building, 25 by 110 feet; cost \$10,000; projected; contract not yet let. For Frank Rackow, two-story brick store building, 20 by 80 feet; cost \$4,000; projected. Also two-story brick store building, 40 by 40 feet; cost \$2,500; projected. For John Pauzer, two story brick store building, 20 by 80 feet; cost \$3,000; under way; John Pauzer, builder. For Henry Bahrens, two-story frame dwelling, 30 by 50 feet; cost \$2,500; projected.

Worthington, Minn.—Architects C. G. Maybury & Son, of Winona, Minn., report: For Bank of Worthington, two story brick bank building, 30 by 60 feet; cost \$6,000; under way.

York, Neb.—Outlook for Spring is fair. Architect N. A. Sherman reports: For E. P. Warner, two-story brick veneer dwelling, 38 by 41 feet. High pitched roof with chambers, tower over small front; cost \$3,500; projected.



EDWIN A. JACKSON & BRO.,

77 BEEKMAN ST., NEW YORK.

Heat-Saving and Ventilating GRATE.

SOME WISCONSIN REPORTS.

(See Back Numbers for Illinois and Michigan Reports.)

The ventilating Grate works splendidly. It warms and ventilates our sitting-room, 18 x 15 x 11 feet, and a bedroom above, 12 x 12 x 10 feet.

CHARLES CHURCHILL,
Clerk Circuit Court, Waupaca.

We have had exceedingly cold weather, but are very well pleased with the working of the grate. The atmosphere in the office is as pure as out-door air.

ANSON EDRIDGE & SON, Fort Howard.

One of our office rooms is 22 x 35 feet, and not until the recent cold weather (30° below zero) were we obliged to call in the assistance of steam heat. The fresh-air supply is especially pleasant.

THE ESTERLEY HARVESTING MACHINE CO., Whitewater.

I regard it as the best, both as a heater and ventilator.

EDWIN REYNOLDS, E. P. Alles & Co's Iron Works, Milwaukee.

The Ventilating Grate is in our sitting-room, 18 x 24 x 14 feet. I have kept house for forty years, but have never known such solid comfort, as far as heat and ventilation are concerned, as we have had since using your grate. In moderate weather we heat and ventilate four rooms below and three rooms above.

S. B. AMORY,

Fond du Lac.

The grates in my library, also in hall, both of which convey heat above, give excellent satisfaction. They are also elegant in their finish and style.

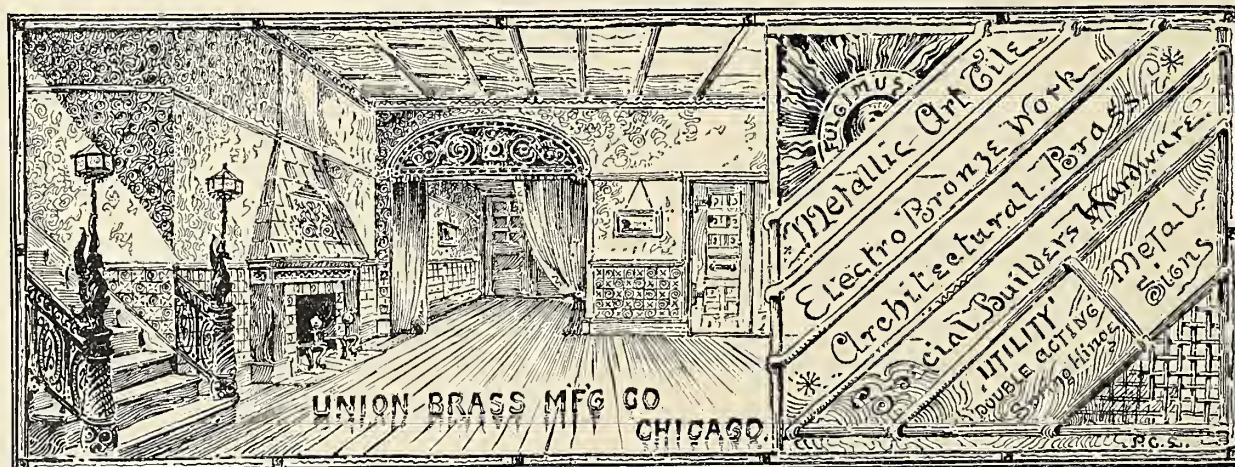
F. N. FINNEY,

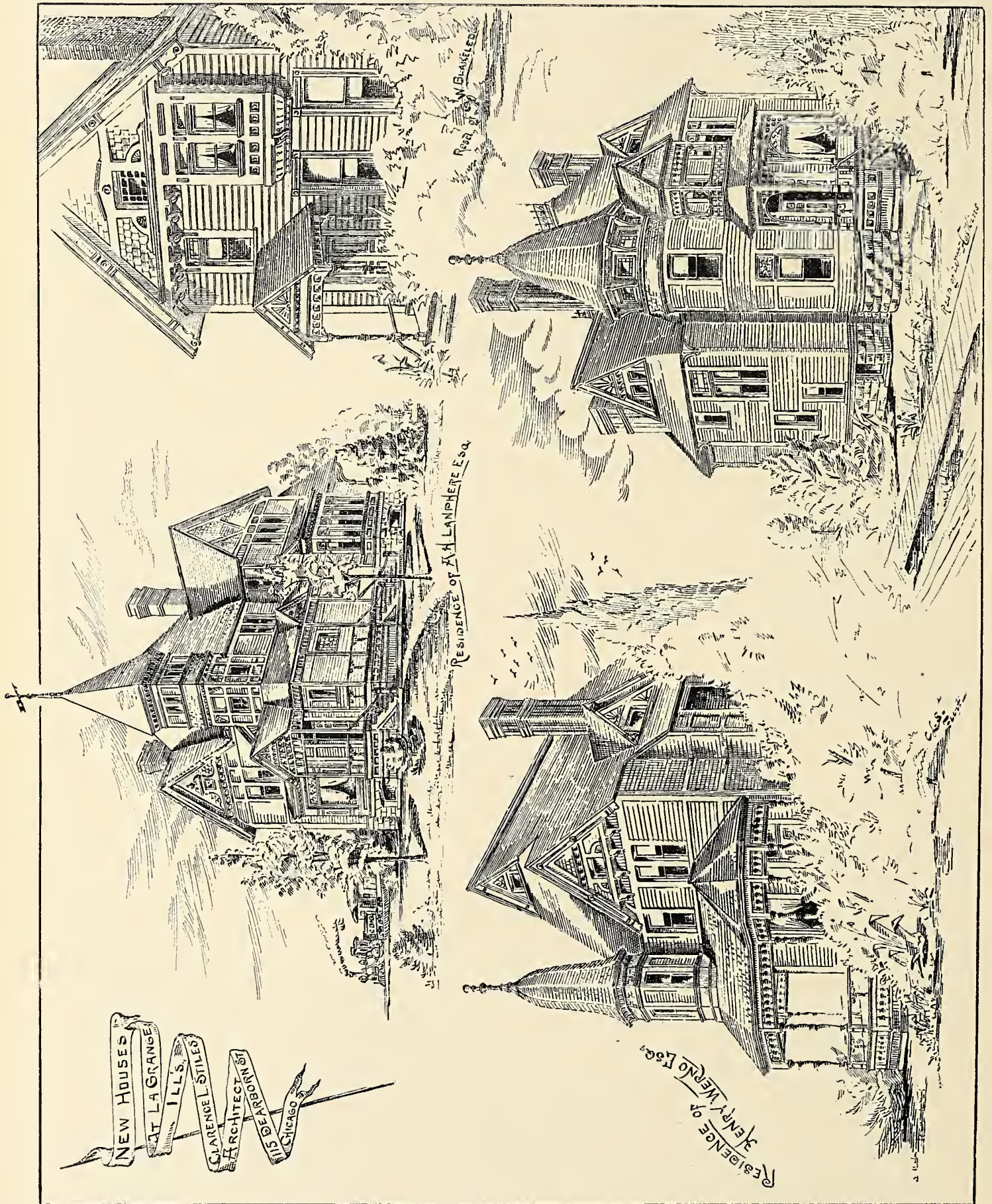
Gen'l Manager Wisconsin Central Ry., Milwaukee.

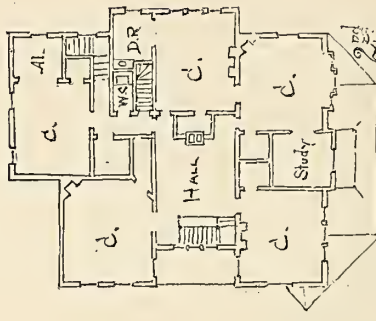
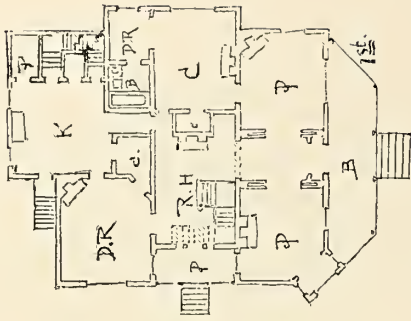
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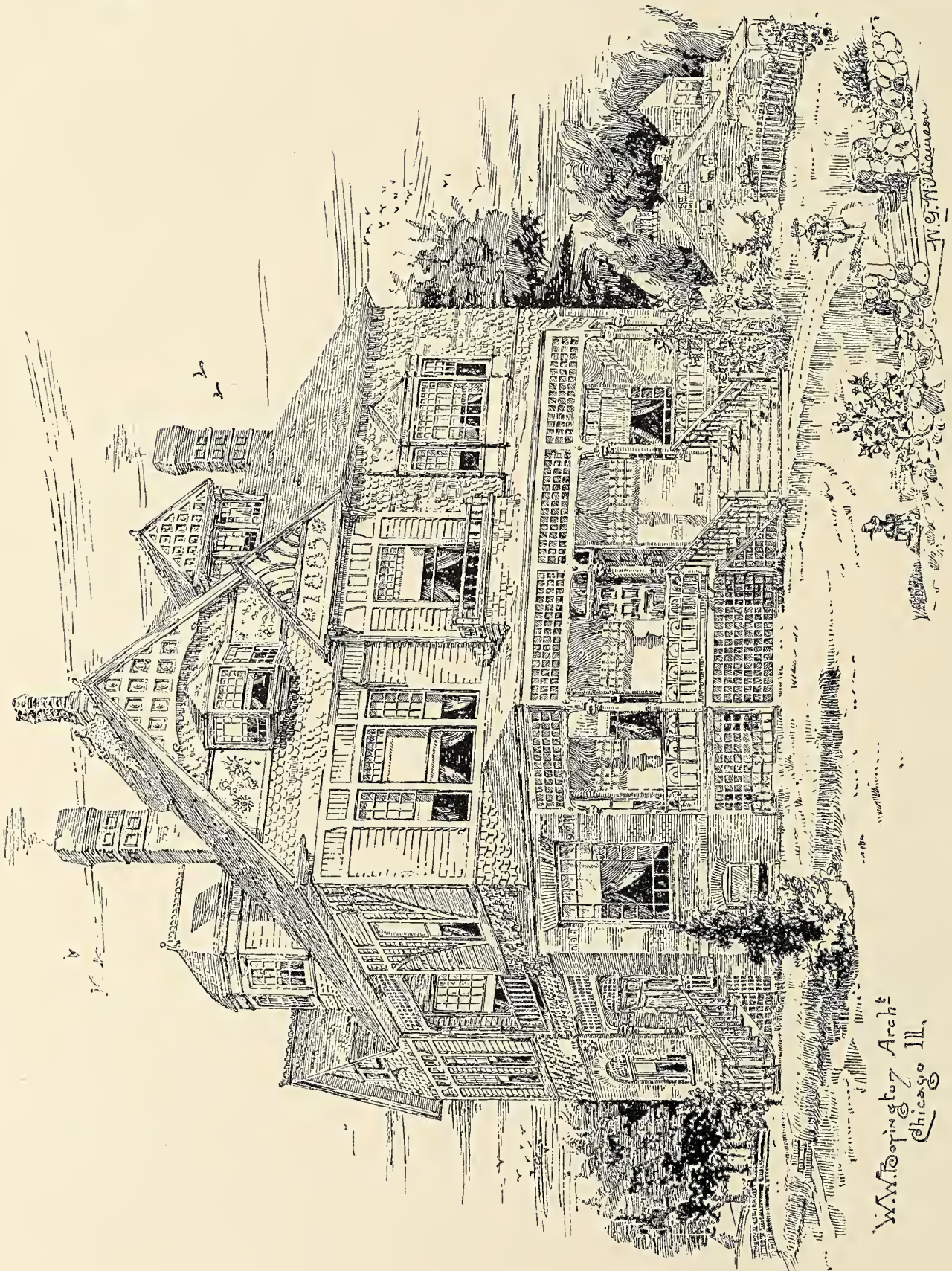
266 AND 268 WABASH AVENUE.



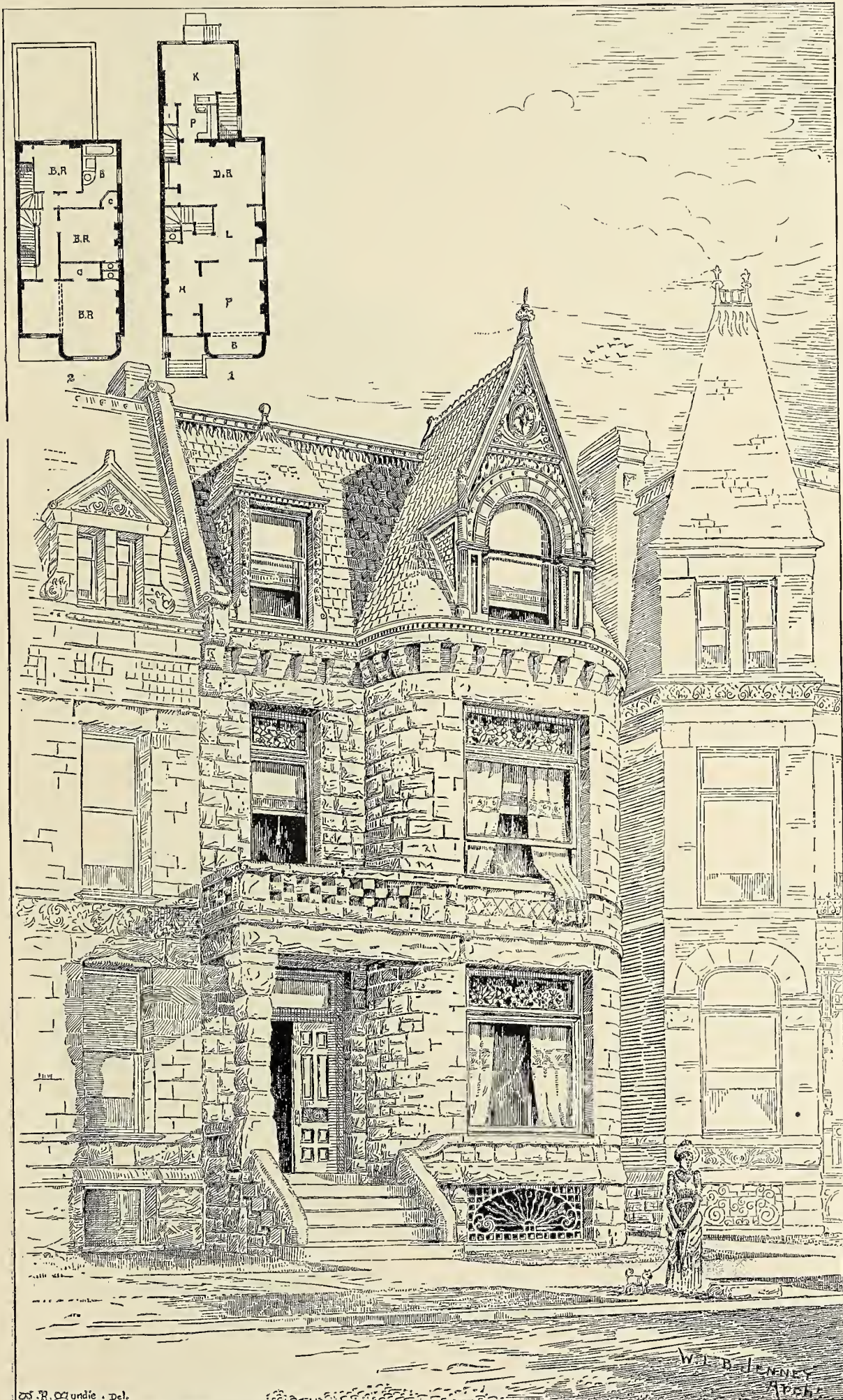




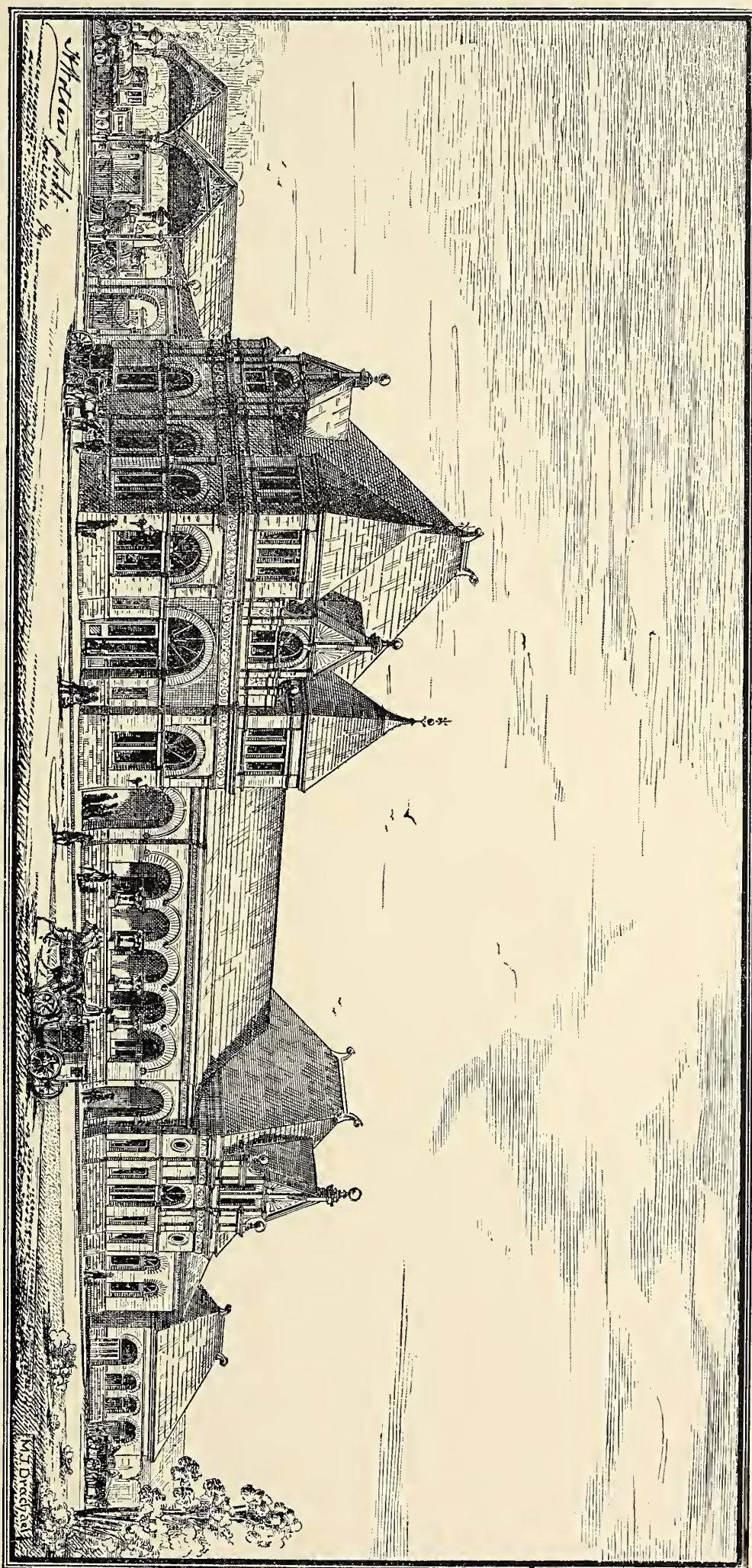
Residence
for
Mr. Geo. Kirk, Esq.
at
Waukegan
Ill.



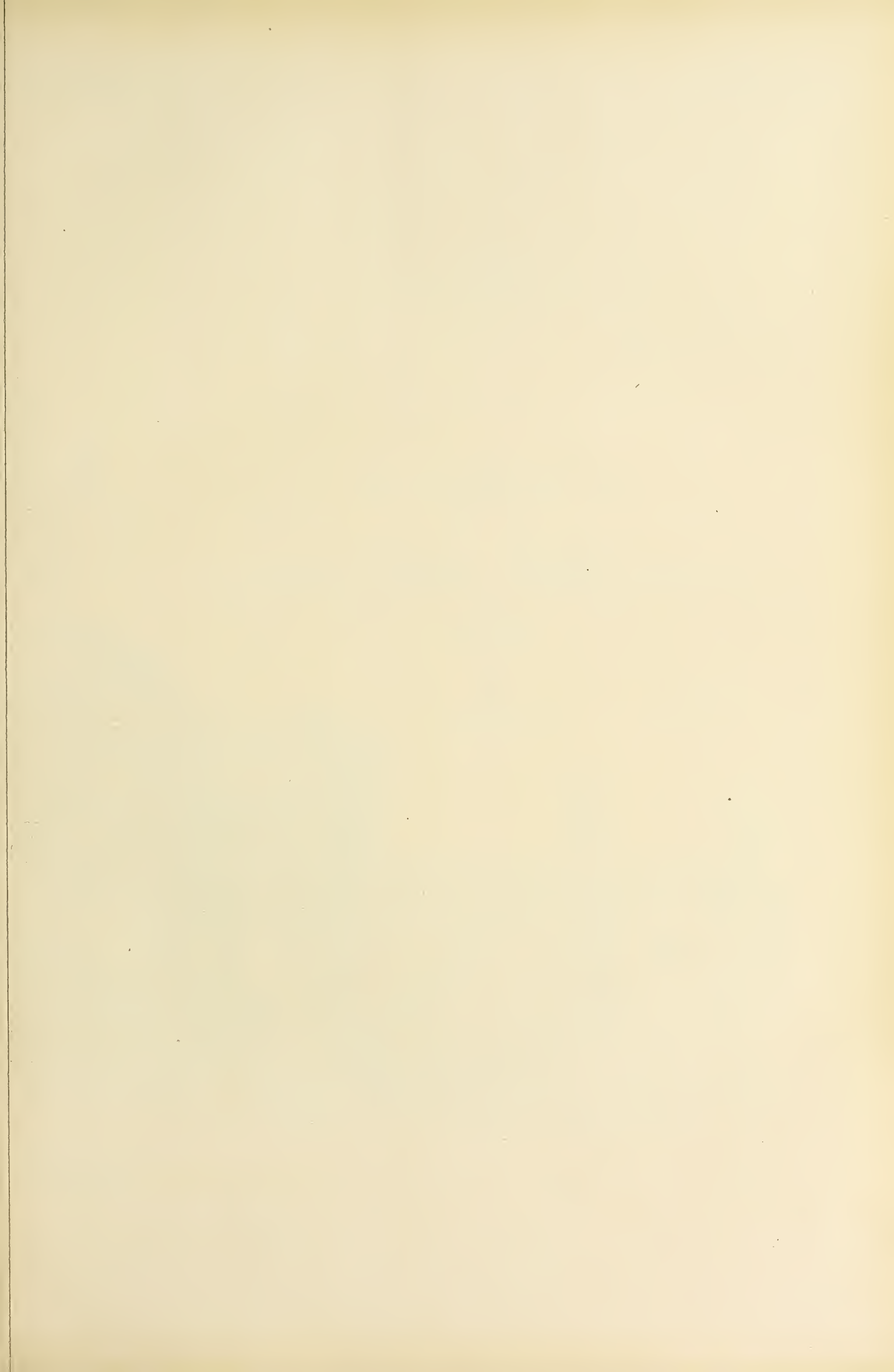
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Chicago Ill.

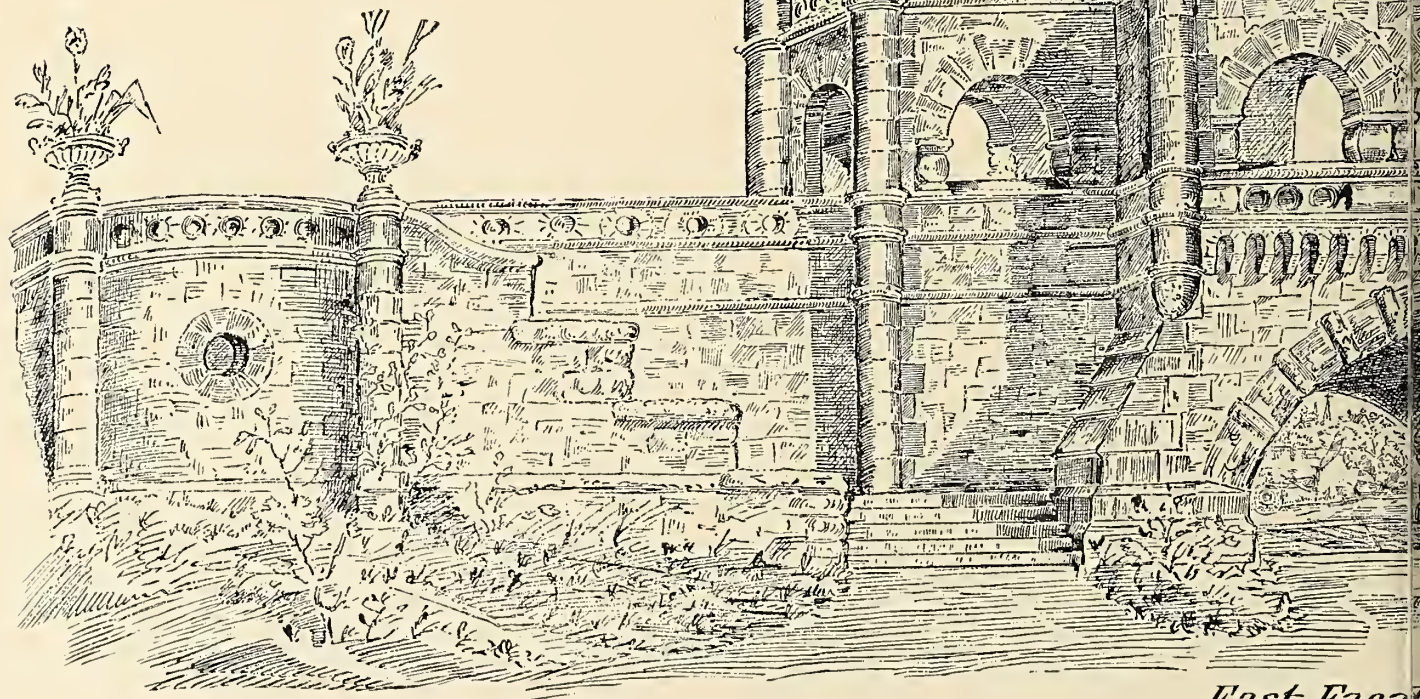
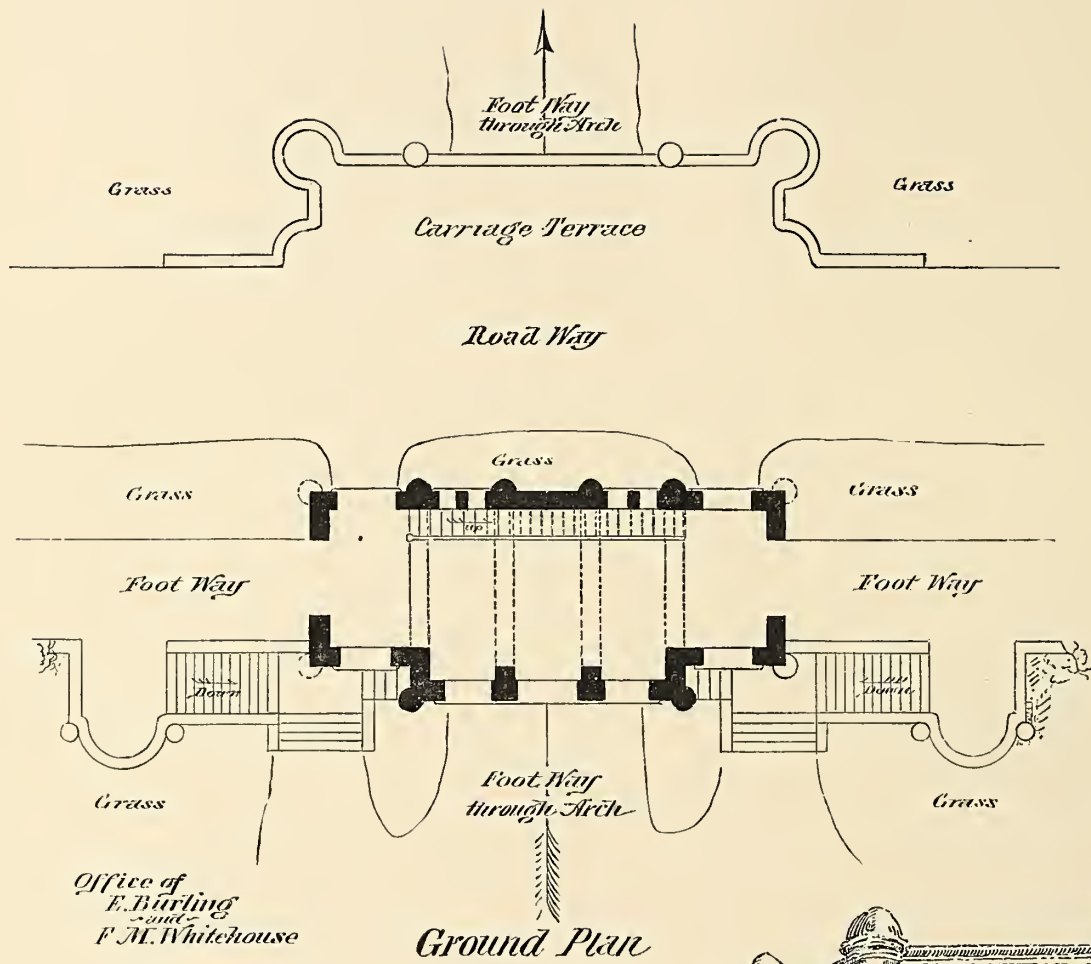


:RESIDENCE FOR J.A. WOLFORD ESQ: CHICAGO:



UNION PASSENGER STATION, BIRMINGHAM, ALA.—By H. WOLTERS, Architect, Louisville, Ky.





East Face
over-looking
GRANT

ACCEPTED DESIGN, TO BE ERE

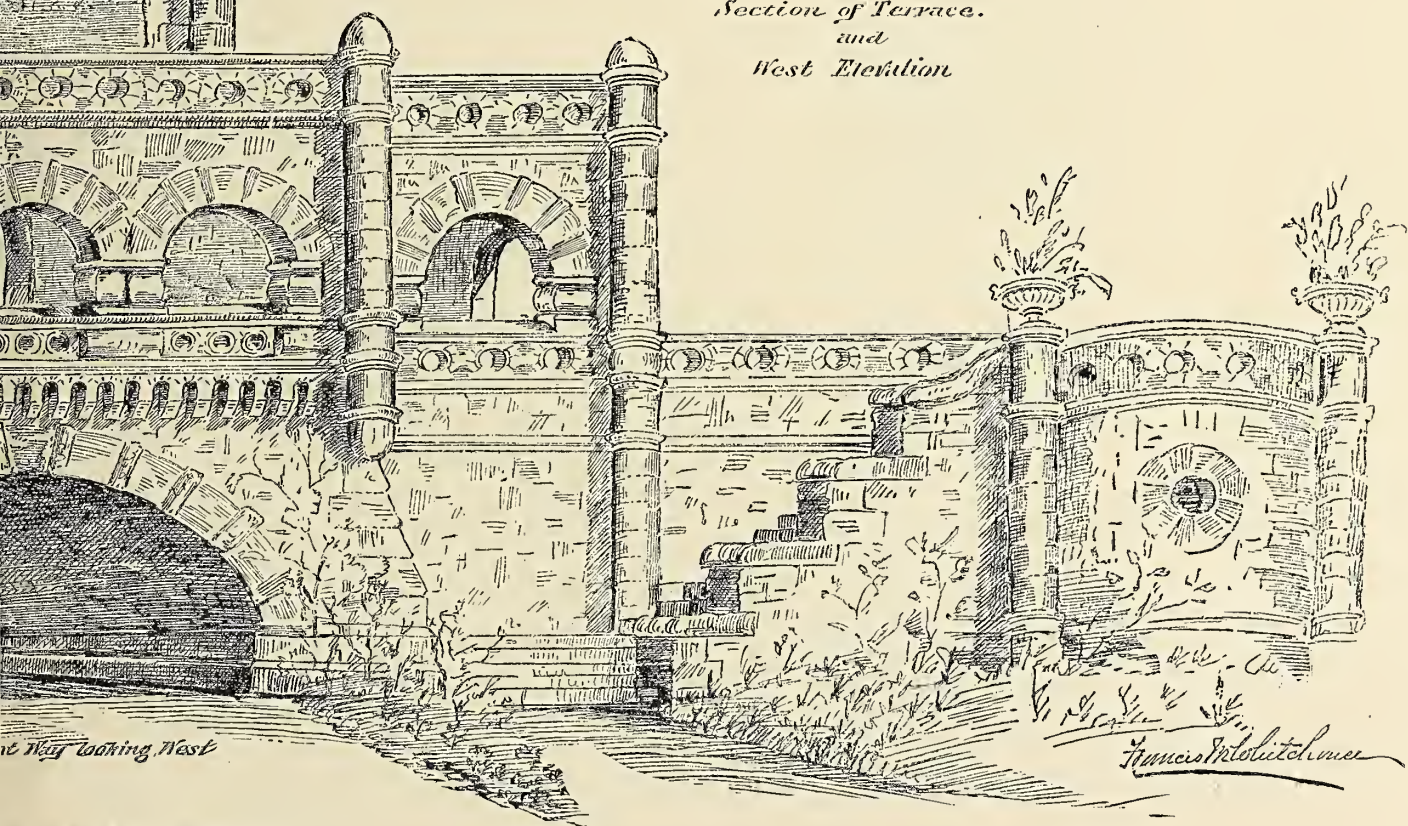
FRANCIS M. WHI



Elevation of Road Way



Section of Terrace.
and
West Elevation



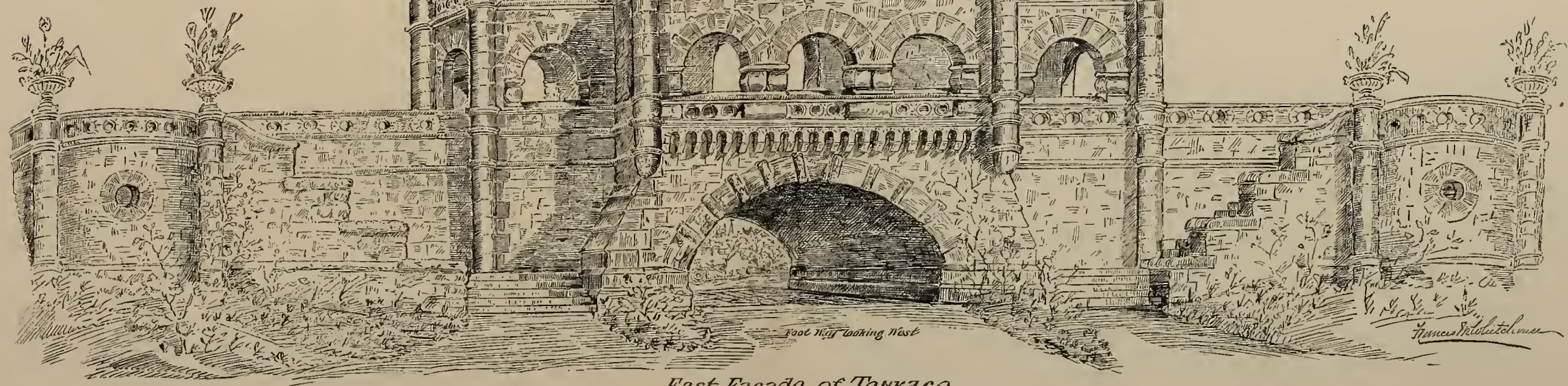
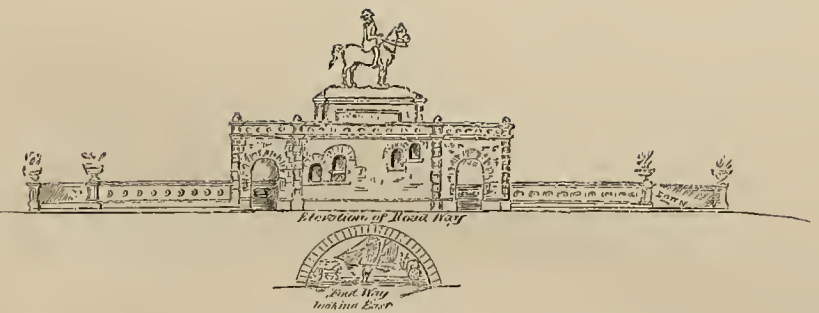
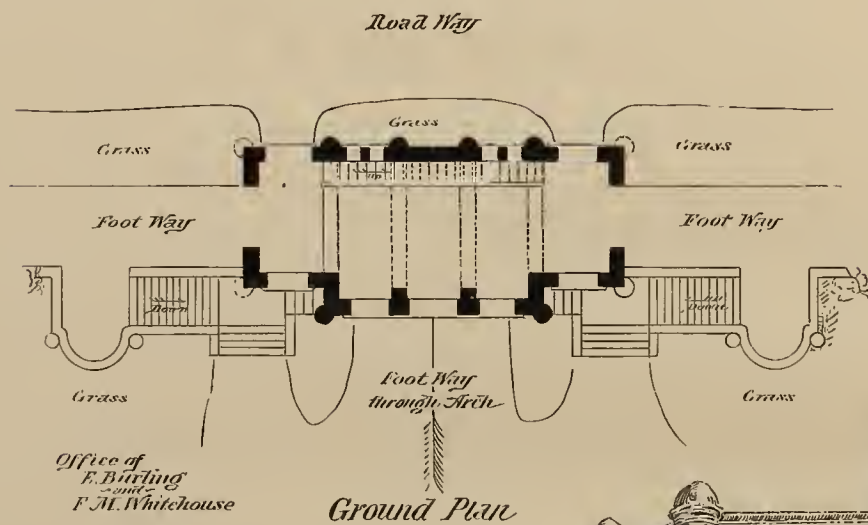
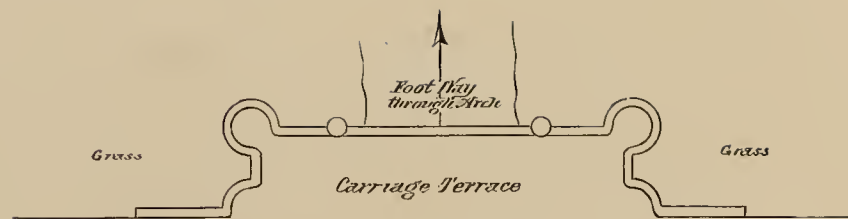
at New looking West

Francis M. Mitchell

of Terrace
Lake Michigan
MEMORIAL,

ED IN LINCOLN PARK, CHICAGO.

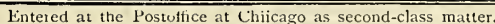
HOUSE, Architect.



East Facade of Terrace
overlooking Lake Michigan
GRANT MEMORIAL,

ACCEPTED DESIGN, TO BE ERECTED IN LINCOLN PARK, CHICAGO.

FRANCIS M. WHITEHOUSE, Architect.



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CHICAGO, ILL.

A. B. Bay Window
W. H. Portland Ave.

til permanent upon. It was in Van Osdell and C present to take but in their absence that at the next read upon the same ings by Dr. De V subject of the bearing

Now this is the blue clay we have to build on. We find traces of creeks or water passages which make an uncertain solidity in the surface and make great care necessary in laying foundations. The soil was good when dry but very treacherous when wet. The speaker called attention to this by cases in point where buildings had settled, and where the Catholic church is located caused a great deal of trouble when the tower was erected. There is to this blue clay a certain resistance to pressure and this pressure must be stable in itself. It need not be demonstrated that the first principle is that we put the weight on the center of the foundation

though a practical rule is that the outside may be a little the larger to make an inclination inward. The pressure of buildings always comes on the ground itself and not on the foundations; hence, the ground is the prime subject for consideration. On this, a substance must be placed which is not yielding in itself. It need not be dimension stone necessarily. That is used so frequently only because it is cheap and abundant.

He laid down, as a first principle, the fact that the areas of base must be in due proportion to the superincumbent loads, and the centers of these areas of base must coincide with the axes of their loads. To illustrate the second portion of this principle, he would take a piece of plank one foot square, resting on water. If a stone be placed directly in its center the plank will keep its true level, but, if placed upon one corner, the plank assumes an incline position, and the axis, which must retain its original angle with the base, is thrust out of its perpendicular line.

Therefore, when a base is laid on this clay, and the axis is placed away from its center, there is a corresponding settlement toward the side having the least projection of base. He would establish a rule, therefore, to make the outside projection a little the largest, so that the settlement of the walls, if any, would be inward, where the joists would keep them apart. If the settlement be outward, there is nothing but the anchors to keep the building from parting, and anchors are never strong enough to do this. In cases where there are high and heavy outside walls, with light inside walls, unless the foundations for the inside walls are constructed proportionately to the weight they have to carry, the walls will go over every time. Before this principle became known, and learned by experience, there were many failures of buildings in Chicago. In building the storage reservoir for the old water-works in 1854, on the old "rookery" lot, where Burnham & Root are now constructing a building, there was a circular wall three feet in thickness, upon which the tank was supported. In the center was a light wall which contained the inlet and outlet pipes. When the water was let on the resistance to pressure on the inside wall being less than it should have been, the ground under the center was forced up and threatened the collapse of the structure. The water was let out as quickly as possible, and a wall constructed intermediately between the outside and center walls, thus equalizing the pressure. If these principles are observed and the weight is carried evenly there can be no remarkable difficulty in building foundations.

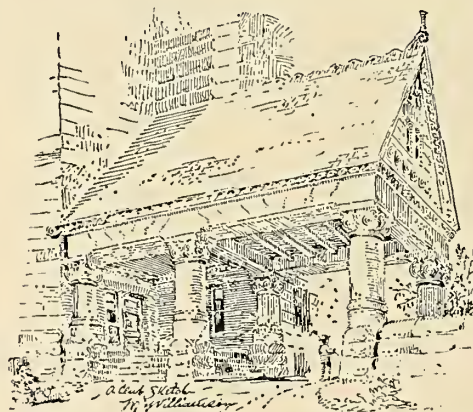
The chair said that the meeting was entirely informal and would call on Architect Dankmar Adler, who said: Mr. Baumann is the one of all architects who first formulated the theory of isolated piers and their proportional construction into shape for use by architects without practical experience. Mr. Baumann's publication entitled "The Art of Preparing Foundations for All Kinds of Buildings, with Particular Illustrations of the 'Method of Isolated Piers' as Followed in Chicago," issued in 1873, was the first publication on this important subject. It required the experience of many years to secure for these principles general recognition and adoption. There were all sorts of arbitrary notions prevalent among constructors; one was as to the peculiarities of a corner pier. It was assumed that a corner pier must necessarily be made much larger and heavier than any other. As late as 1878, when I constructed the Central Music Hall, a prominent architect protested against the smallness of the foundation for the corner pier. He was sincere but misinformed, overlooking the fact that the foundation was constructed directly in proportion to the load put upon it. Incidents are numerous illustrating the correctness of the theory. In many instances it is a positive error to make a foundation large. I remember, five years ago, we constructed a store building between two heavy party walls, between which were two piers designed to carry a light iron and glass front. The building was rushed through without as close supervision as should have been bestowed upon it. When the foundation was completed, the mason contractor came to me and said that he had done a good job on the center piers. He had put in "busting" good foundation stones, instead of using small stones as specified. I became alarmed, and upon examination found that instead of stones two feet six inches square, as specified, he had put in one three feet by four feet six inches, and the other over four feet square. By and by the building was up, and, as I expected, the walls at the side began to go down with the center piers rigid. I had the long stone drilled off, and, as it was impossible to drill the other off, I had the corners cut off, and kept a man employed for several days in keeping the soil loose underneath the outer edges of the stones, until, in ten days the trouble was corrected. In many cases where breaks occur in fronts it is due to a like cause. Another condition of Chicago soil makes foundations suffer. Once in a while we strike a soil which is a mixture of quicksand and clay. If the foundations are lower than the sewers, it makes a good substratum for buildings. But if rain comes during work and fills the trenches the foundations will suffer more than in other soil. There is no remedy except to scoop out the wet slush and fill up with dry. Another source of difficulty is an error which is made by all of us in all kinds of buildings, in calculating too great a load for the floors which, except in the case of warehouses, rarely ever receive the load calculated upon. The interior pier foundations are made too heavy, and the result is that the outside walls go down and the inside piers go up. We almost always allow for a load which will never come. Again, in small buildings, there seems to be a holding in of the soil by outside walls, causing a convexity of surface. A method has been introduced of using T rails and concrete in foundations which has become generally used in the large buildings now being erected. Mr. John W. Root is present, and as he has large experience with this method as well as with construction under cover, he could perhaps give valuable information and data on this subject. In regard to Burnham & Root's construction of foundations in winter under cover they deserve great credit, in the same degree as is awarded to the man who causes two blades of grass to grow where one grew before.

Mr. Root said: I agree with all that has been said by Mr. Baumann and Mr. Adler, and to one point mentioned by Mr. Adler too much emphasis cannot be given, this was the disposition to fortify strongly, light-carrying piers. Light piers should be correspondingly lightly based and bases of heavy piers strengthened. The light pier also has to resist the

upsetting wave caused by the downward motion of large piers. The weight which is apportioned to the light piers does not come upon them until the heavy piers are weighted. Inside piers should settle more than outside walls, in order to bring the thrust of the walls inward. We have used steel rails for piers because they have been forced on us. In large mercantile buildings the sub-basement is quite as valuable as the first story and, with dimension stone, the piers are so large that no space is available. The necessity first arose in the construction of the Montauk block, where some light and easily handled material had to be used, which excluded dimension stone. Our method of using steel rails is to lay enough concrete on the clay to secure a perfectly level bearing surface. On that, lay the rails, grouted in and covered over with concrete, providing for a theoretical load of 3,000 pounds to the square foot. Another section of rails is then laid and the pyramid, when complete, represents a solid mass of composite iron and concrete. Upon this the plate is laid and the pier erected and the result is that the piers in the basement are no larger than those in the first story. Heaviest steel rails are more economical than light, or even than wrought-iron. We adopted the cover over our foundation work also under necessity, as the work had to be rushed and we could not allow the weather to interfere. The shed over the foundations for the Phoenix building on Jackson and Clark streets, cost less than \$1,200, and about one half of that will come back in lumber which can be used for scaffolding, etc. The shed is perfectly lighted and a few salamanders keep it perfectly heated.

In the general discussion which followed Mr. Baumann said: I might speak of cases where it is necessary to put very light piers between heavy walls close together. You can either put iron beams across from wall to wall and erect piers on them, or throw across light arches and put piers on them.

Chicago Builders' and Traders' Exchange.



THE second annual report of the exchange, recently issued, shows an exceedingly prosperous condition. The treasurer's report for the year shows a surplus of \$8,024.10, with a library and furniture which swell the assets of the exchange to \$11,080.86. The membership of 485, shows an increase of 80 during the year. But one death has occurred among the members during the year.

At a special meeting called on the 12th inst., by the secretary, to take action upon the amendment or repeal of the lien law of the state, the attorney for the exchange, Mr. E. E. Prussing, made the following remarks upon its history and practice:

*The mechanics' lien laws of the several states are designed (1) to aid mechanics in securing compensation for their services; (2) in a greater or less degree to secure the wages of laborers employed by the chief contractors upon buildings and other improvements upon real property; and (3) to secure the furnishers of material, such as lumbermen, brickmakers, etc.

The lien is a preference given by law over the other creditors of the party for whom the work is done or material furnished, upon the land or improvements thereon, or both. The right is founded solely upon the statute, and unless the party claiming to be entitled to its benefits brings himself within the regulations so prescribed, he is without remedy of this kind. Its force and efficiency are derived from a strict compliance with the statute. Its principles are believed to be founded in natural justice and equity, in that he who shall have enhanced the value of the real estate by his labor, or by materials supplied for its improvement, shall have a preferred claim on the property to secure the payment for such labor or materials.

The general current of authority in the courts favors and indulges liberality toward claims under the mechanics' lien laws, and as a rule it may be said that a proper compliance with the statute provisions will in all cases secure to the claimant a just compensation.

The law is usually meant to secure certain classes: first, the contractor, or principal in the erection or improvement; second, those who are sub-contractors, as laborers and workmen, and also all such as furnish any and all materials for the buildings, etc., and who sell or furnish such material to the contractor. For, if they furnish the material directly to the party for whom the improvement is built, they are contractors, and their rights are governed by the rules applying to contractors. The various parties in such a lien are the "owner," or principal for whom the work is done, the "contractor," or original party who undertakes to perform the work, or do both this and furnish the material, and the "sub-contractor." The latter class comprises all persons who are hired by the "contractor" to work for him upon the erection or improvement as laborers, bricklayers, carpenters, and workmen generally; also all persons of every trade who may or do furnish any materials, as lumber, brick, lime, hardware, stone, etc., for the building or improvement. The sub-contractor, then, is any and every person below the party who makes the original and independent contract to perform the work and furnish the materials for the erection to be put up. He is any hired help employed by such principal, or who furnishes any or all materials required.

There is no direct evidence as to what cause in particular gave rise to the system of mechanics' lien adopted in the United States. It has been supposed by some that in Pennsylvania, which was among the first to establish the principle, it owed its existence to the analogous provisions contained in the act of that commonwealth of 1784, relating to persons employed in building and repairing vessels. Others seem inclined to trace its origin exclusively to the necessity in a young and growing country of fostering mechanical and industrial pursuits, and the manifest equity of dedicating primarily buildings and the land upon which they are erected to the payment of the labor and materials incorporated, and which have given to them an increased value, the expediency of encouraging the building of towns and cities, together with the natural justice in the statutes, and the power in a republican government of the class itself the law was designed to protect, early in the history of this country gave birth to this system, which, in the completeness of the lien, secured the remedy, the protection of the rights of all parties, and its limited and harmonious restrictions upon the conveyance of real property far surpasses similar provisions of the civil law, and of those countries which have founded their jurisprudence on its principles. The first attempt to create a mechanic's lien arose from a desire to establish and improve, as speedily as possible, the city of Washington as the permanent

*The matter here presented is condensed from various well known text-books on the subject of mechanics' liens.—E. E. P.

seat of government of the United States. At a meeting September 8, 1791, of the commissioners appointed for this purpose, at which both Thomas Jefferson and James Madison were present, a memorial was adopted urging the General Assembly of Maryland to pass an act securing to master builders a lien on the houses erected and land occupied, which was, during the same year, followed by the passage of the law as requested. The next statute on the subject was passed by the legislature of Pennsylvania in the year 1803. These statutes, while they contained the germ of all subsequent legislation on the subject, are imperfect and meager in comparison to the state of the law at the present time. The whole subject has been one of gradual growth, extending from imperfect and limited enactments, embarrassed by adverse decisions, to the settled policy of all the states, and of unquestioned importance. The experiment was at first confined to towns and cities, but has, by degrees, as its necessity and justice became apparent, extended itself, in a majority of the states, to the agricultural districts. The lien was designed, in its inception, for the most part to secure only the original contractor until the frauds perpetrated upon sub-contractors and workmen gave rise to amendments for their proper protection. It attached, in some of the states, only when the party making the contract was the owner of the legal title in fee simple. It is now generally provided that, however small may be the interest of the contracting party, the lien fastens itself to that extent. Formerly it applied by some statutes only to cases of original construction; it is now almost universally applicable to repairs. It was confined, in some localities to the building of dwelling-houses; at present, where the pursuits or industries of the particular section of the country render it of sufficient importance, it attaches to bridges, canals, flumes, railways, etc. Distinctions were sometimes made between labor performed and materials furnished; they are now universally deemed equally meritorious. And where statutes failed, by express terms, to subject the land to the lien, as well as the building, the courts have, by judicial interpretation, remedied the defect. These, and many other changes, will suffice to show the stages through which the law has passed. Its complete history is not to be found in the enactments of any one state; as each has legislated upon the subject it has been guided by the experience of others, extending its provisions when necessary, and, in some instances, repealing privileges found to operate injuriously to the public, and which were passed through, probably, an over-anxious zeal to protect the laboring classes, until a system has grown up at once just and rational, securing the public from all danger of secret liens, and labor and capital their lawful rights. It is not to be assumed, however, that the statutes of any one state have presented all these defects, or have attained a perfectness as to render future legislation unnecessary. In some the law is still inadequate to the full protection of the rights of the working-man and material-man; while in others the privileges secured operate with hardship upon owners, and, reflectively, to the detriment of the mechanics. The true system is to be found in that which gives an undue advantage to none, while recognizing the just rights of all.

The mechanics' lien law of this State provides that two classes of persons shall have liens. The first class comprises those persons who contract directly with the owner, whether as builders, mechanics or material men. The second class comprises those who deal with those persons who have contracted with the owner, and these, whether builders, laborers or material men, are called sub-contractors. Our law makes no provision for the very large number who, either as laborers, mechanics or material men, deal only with the sub-contractors.

The provisions for the benefit of the persons dealing directly with the owner are simple and effective. They give a secret, first mortgage lien on the building, and on the owner's interest in the land, be that interest more or less. Little or no complaint is ever made with respect to them.

The provisions for securing a lien to the second class, that called sub-contractors, are not quite so simple.

They are in brief, *first*, that the aggregate of the liens shall in no event exceed the sum fairly fixed as the contract price between the owner and original contractor, and, *second*, that the sub-contractor shall give due notice of his claim to the owner, and no claim of any sub-contractor shall be a lien except so far as the owner may be indebted to the contractor at the time of giving such notice or may become indebted afterward to him as such contractor.

The result of these two provisions is that the sub-contractor's lien is enforced by a sort of garnishee process, and its security is entirely dependent upon the amount due the original contractor at and after the time of giving the notice.

These provisions of the law in this State and elsewhere are the cause of frequent complaint because of the failure to give notice in time to secure claims, either in full or in part, in fact it may be said, this is the sole ground for complaint with respect to these provisions, for it is very seldom that the owner and contractor can so collude with respect to the price of the work as to seriously affect the sub-contractors.

To these complaints there is one, and, so long as the law remains unchanged, only one reply:

"Give notice of your rights in every case at the beginning of your undertaking either as mechanic or material man." Make it fair and respectable to give notices of such claims by agreeing among yourselves that it shall be done, and that you will deem it unprofessional, unbusiness-like and ungentelemanly conduct on the part of any architect, builder or mechanic, a member of this board, to complain of it.

Whether the right to a lien should be extended to those who deal with the sub-contractor, and so, are at present unprotected is an open question. The courts and public are decidedly opposed to it, and their reasoning finds expression as follows: Although the sub-contractor and material man have been secured, in many of the states, either a lien on the property or a right of action against the owner to recover any balance due the contractor on his contract, yet these privileges have been more rarely extended to sub-contractors in the second and third degree. The plainest expressions of law must be adduced to entitle them to the remedy. Statutes which are opposed to common right and confer special privileges upon one class of community not enjoyed by others, should receive a strict construction, and parties claiming its benefits must bring themselves clearly within its provisions. To allow the right of lien to a sub-contractor in the third or fourth degree or beyond would be impracticable, as well as imposing hardships which would follow in many supposable cases. If the right to the lien can be extended indefinitely, then it is very obvious there would be no safety in contracting for the erection of a building, and no prudent man would do it. The operation of the act might also be extremely oppressive upon the contractor; and his only protection would be in refusing to sub-contract the job, because if the remote workman under the sub-contractor, in whose contract the original contractor has no interest, over which he can exercise no control, and which therefore may be injudicious and extravagant for ought he can do, can, by presenting his attested account to the owner collect it, so far as any balance due the contractor remains in his hands, the whole fund may be exhausted in spite of the contractor, though the job may have been but partially finished. To make the original contractor liable for the debts of his sub-contractor, *ad infinitum*, would necessarily be injurious to the mechanics themselves, particularly to those of limited means. It would be unsafe in that case for the principal contractor to make any payments or advances to the sub-contractors who had undertaken to do particular portions of the work, until their several jobs were completed, and they had furnished to him conclusive evidence that all the journeymen and laborers employed by them respectively had been paid in full, and the various sub-contractors would have to raise money some other way to pay such journeymen and laborers, or those who actually did the work would have to wait until the sub-contract was fulfilled, so that they and the sub-contractor could be paid off by the original contractor at the same time, the probable effect of which would be to suspend the payments of the daily pittance which the journeyman frequently wants for the immediate use of himself and his family, or to compel the great mass of industrious and enterprising mechanics in our cities who have as yet acquired no capital and but little credit, to become mere journeymen of a few wealthy contractors, by placing them in a situation in which it would be impossible for them to obtain sub-contracts for a part of the work.

A general discussion of the law then followed. Mr. William E. Frass thought the law failed in its objects, especially in not fully protecting the material man. Mr. Hinchcliff thought the law ought to be amended so as more fully to protect the sub-contractor and the material man.

Mr. Scates was of the opinion that everybody was fully protected under the law if he put himself strictly within the law, except in cases where incompetent contractors had undertaken to build at too low a price. He thought, moreover, that it would be pretty hard to frame a law requiring owners to know what a building ought to cost and accepting no bid for a less price, or to prevent incompetent contractors from making bids.

Mr. Hunter believed the building trade would be better off without any more protection than the ordinary processes of the law given to the wholesale grocers and dry goods merchants, that the tendency now was to create

too much class legislation and this was all wrong. The statute books were lumbered up with too much law that was not equity.

Mr. Corcoran believed the present law should be repealed and a simpler but more sweeping one passed in its place. Mr. Hinchcliff moved that a committee be appointed to interest kindred organizations throughout the state in this matter and secure the passage of a simpler but more effective law in its place. This resolution was referred to the executive committee. The meeting then adjourned for two weeks.

The managers of the Exchange are earnestly at work organizing an exhibit of all the materials and appliances connected with building, and have, as a preliminary, secured exhibits from a large number of the leading local firms, the first four days of canvass showing upward of 1,000 square feet taken. The entire building, six stories, 80 by 160 feet, has been placed at the disposal of the Exchange, and will be fitted for its use as the demand for space requires. The Exchange takes the rental responsibility and will charge exhibitors for space pro rata, at the same time guaranteeing that the cost shall not exceed \$3 per square foot of space. As the prospect for a full representation of all the reliable building material in the country, east or west, seems to be assured, a reduction from this rate will probably occur before the story to be added to the building especially for the exhibits is completed. It is expected that the exhibit will be open to the public May 1.

Synopsis of Building News.

Abilene, Kan.—Architect H. M. Hadley, of Topeka, Kan., reports: For M. M. Shipe, two-story frame dwelling, Queen Anne style; cost \$4,500; finishing.

Asheville, N. C.—Architect Joseph F. Baumann, of Knoxville, Tenn., reports: For First National Bank, three-story brick building, 33 by 60 feet, slate roof; cost \$4,300; making drawings. For T. J. Van Gilder, two-story brick residence, 60 by 80 feet, slate roof; cost \$15,000; drawings under way.

Atlanta, Ga.—Architects Edbrooke & Burnham, of Chicago, Ill., report: For Y. M. C. A., four-story and basement building, 65 by 90 feet, the front will be of rock-faced and dressed stone; cost of building \$75,000.

Chicago, Ill.—Architects Burnham & Root, report: For Argyle Apartment House, 172 by 38 feet, corner Jackson street and Michigan avenue, seven story, pressed brick and iron building, fireproof. For Pickwick Flats Co., six-story and basement fireproof flat building, 30 by 40 feet, corner Michigan avenue and Twentieth street, basement granite, superstructure pressed brick.

Architects Adler & Sullivan report: For W. A. & C. J. Peck, southeast corner South Water and La Salle streets, 80 on Water by 100 on La Salle street, six stories and basement, Purlington pressed brick and limestone trimmings; cost \$30,000; contractors, E. Earnshaw, mason; Blair & Bristol, carpenters.

Architect W. W. Boyington is advertising for bids for bronze bookcases and brass elevator guards for the Illinois State house, bids to be opened March 18, at Springfield.

Architect H. R. Wilson, reports: For W. H. Thomas, seven-story brick and stone office building, 65 by 50 feet, corner of Dearborn and Harrison streets, steam heating, elevator, etc.; cost \$50,000; under way. For R. Granger, two-story and attic frame dwelling, 30 by 48 feet, at Lake View, steam heating, hardwood finish; cost \$5,000. For W. F. Whiteman, three-story apartment building, 46 by 72 feet, Laflin and Congress streets, hardwood finish; cost \$15,000. For H. Davis, four three-story and basement store buildings, 48 by 88 feet, corner of Ogden and Sawyer avenues; cost \$24,000. For H. Davis, six two-story and cellar dwellings, 120 by 48 feet, corner of Sawyer avenue and Nineteenth street; cost \$24,000.

Architect W. A. Arnold reports: For Lyman & Giddings, three-story apartment building, corner of Lake and Ada streets; cost \$15,000. T. C. Goudie, contractor.

Cleveland, O.—Architects C. F. & J. A. Schweinfurth: For H. S. Vail, three-story double-brick tenement, 41 by 68 feet, at 265 Prospect street; cost \$12,000; John Oliver, carpenter, Scott & Collier, carpenters. For C. M. Clarke, three-story frame dwelling, 35 by 68 feet; cost \$15,000.

Architect Geo. H. Smith: For W. H. King, six-story business block, Ohio stone front; cost \$30,000; Thomas Simmons, mason, Sayers & Watterson, carpenters.

Architects Coburn & Barnum: For Western Reserve Medical University, four-story brown stone building, 90 by 144 feet; cost \$150,000; Thomas H. Lucas, mason, Scott & Downer, carpenters, Frederick Tudor, steam heating.

Architect C. O. Arny: For Mrs. A. K. Cole, two-and-one-half-story frame dwelling, 80 by 85 feet; cost \$15,000; Hamilton & Looney, masons, J. Venning, carpenter.

Cleveland, Tenn.—Architect A. Delisle, of Chattanooga, reports: For Centenary College, three-story brick addition, 60 by 125 feet, for music hall, general school-room and dormitories; cost about \$10,000; projected.

Conneaut, Ohio.—Architect David K. Dean, of Erie, Pa.: School house; cost \$11,000.

Creighton, Neb.—Outlook for the coming seasons building is good. It is predicted that this will be a big year for this section.

Architect N. L. Raymond reports: For E. Cheney, two-story brick bank and office building, 25 by 75 feet; cost \$7,000. For W. L. Turner, one-and-one-half-story frame dwelling, 16 by 24 and 12 by 14 feet; under way; N. L. Raymond, builder.

Des Moines, Ia.—The Reformed Lutherans (Swede) expect to build a church here this season.

Louis Harbach will build a six-story business house, for retail business; Architects, Foster & Libbe.

The city contemplate building a hospital this year.

Messrs. Polk & Hubbell will build forty tenements on Sycamore street; C. H. Atkin is the builder; no architect employed.

There is talk of a new hotel being built this year, on the corner of West Fourth and Locust streets, by a stock company, headed by Mr. James Savery, to be known as the "Savery Hotel."

The agricultural society will do some building on their permanent grounds east of the city; W. F. Hackney is their architect.

Mr. G. M. Hipper will build a new residence on west Center street; cost about \$5,600; Foster & Libbe, architects.

Mr. T. Boyd proposes to erect four business houses on Locust street, near Fifth.

The Odd-Fellows are talking of building a permanent home on their present property on Locust, between Sixth and Seventh streets.

Mr. Fritz will build a business house on the corner of Third and Locust streets.

Dodge City, Kan.—Architect H. M. Hadley, of Topeka, Kan., reports: For Dodge City, ward school house, two-story, brick, 49 by 55 feet, tin roof; cost \$8,000; under way.

Dubuque, Iowa.—Present condition and outlook fair.

Architect Frid Heer reports: For Trexler Bros., three-story brick stable, 51 by 100 feet; cost \$6,000; under contract. For Peter Specht, two-story brick addition to store building, 20 by 110 feet; cost \$4,000; projected. For Mr. Getzen, two-story frame dwelling, 32 by 48 feet; cost \$3,000; projected. For Henry Hoffmann, two-story brick store and dwelling, 26 by 100 feet; cost \$6,000; under roof. For J. A. Walter, three-story brick addition, 24 by 20 feet, to warehouse, 24 by 100 feet; cost \$4,000; projected.

Dyersville, Iowa.—Architect Frid Heer, of Dubuque, Iowa, reports: For Wm. Frick, two-story frame dwelling, 62 by 20, with wing, 24 by 24 feet; cost \$3,500; projected.

Elkhart, Ind.—Architect A. Druiding, of Chicago: For Rev. Kroeger, Catholic church, 51 by 125 feet; brick. Contracts not let.

Englewood, Ill.—Architect David K. Dean, of Erie, Pa.: For Chas. Siegel, frame residence; cost \$6,500. Under way.

Erie, Pa.—Architect David K. Dean reports the following work now under way: For Riblet Bros., furniture warehouses, 124 ft. 6 in. by 75 ft.; five stories high; cost about \$25,000. For Mr. Ed. Moore, brick dwelling; cost \$6,500; G. W. Fassett, builder. For Dr. T. J. Elliott, frame dwelling; cost \$3,500; G. W. Fassett, builder. For First

National Bank of Erie; cost about \$25,000; contract not let. For city, city hall; cost \$150,000; Donnelly Bros., contractors. For Geo. Metcalf, brick dwelling; cost \$8,800; Henry Shenk, contractor. For E. S. Rice, three frame dwellings; cost, each, \$3,000.

Galveston, Texas.—Present condition of building is good. Outlook uncertain.

Architect J. N. Clayton reports: For J. W. Burroughs, two-story frame, metal roof; cost \$2,000; under way; W. A. Powell, builder. For S. B. Burck, raised frame cottage, with attic; asphalt and shell roofing; cost \$3,000; under way; W. F. Floyd, builder. For J. Z. H. Scott, one-story and basement and attic brick house; slate roof; cost \$6,000; contracts not yet let. For L. Kauffmann, two-story frame; metal roof; cost \$4,000; contract not yet let. For Public School, corner Avenue K and Twentieth street, two-story and basement brick building; slate roof; cost \$25,000; under way. For Theo. Olmsted, two-story frame; slate roof; cost \$6,000; contract not yet let. For Judge J. L. Darragh, two-story frame; metal roof; cost \$4,000; contract not yet let.

London, Tenn.—Architect Joseph F. Baumann, of Knoxville, Tennessee, reports: For W. L. Kline, ten-room frame dwelling, 44 by 60 feet; cost \$3,500; making drawings.

Mankato, Minn.—Building outlook is good. Much building is talked of. Blue Earth County will build a \$75,000 court house this season. Mr. L. Patterson contemplates the erection of a residence to cost from \$7,000 to \$8,000. Mr. John Ray will build a three-story store building, 44 feet front.

Architect Geo. Pass reports: For E. Seering, farm buildings, to cost \$4,000; under way. For Chas. Forster, barn, 40 by 64 feet; cost \$2,000; under way.

McMinnville, Ore.—Outlook is not flattering. Architect J. C. Cooper reports: For Presbyterian Society, veneered-brick church building, 32 by 60 feet, shingle roof; cost \$4,000; projected.

Mt. Carroll, Ill.—Architect William Thomas, of Chicago, for the Mt. Carroll Hotel Company, a hotel, three stories and basement, 48 by 90, front Anderson pressed brick. Basement will be well above ground and contain barber-shop, laundry and fuel room; parlors, office, reading, dining-room and kitchen on first floor. Cost, \$20,000.

Newton, Iowa.—Architect Geo. W. Fehleisen, of Chicago, reports: For First National Bank of Newton, two-story brick bank and office building, 23 by 70 feet, stone trimmings; cost, about \$4,000; plans in preparation.

New Corporations.—The Chicago Fireproofing Co., Chicago; capital stock, \$100,000; to mine and manufacture clay, and to mine coal; incorporators, Henry Burrell, Alexander Burrell and Archibald Burrell. Master Plumbers' Sewer Pipe Association, of Milwaukee; object, to purchase and sell sewer pipe; capital stock, \$2,500; incorporators, G. A. Spence, H. C. Apel, and Charles Polacheck. Wilbur Lumber Company, of Milwaukee; object, to deal in lumber, lath, shingles, coal and brick; capital stock, \$100,000; incorporators, R. H. Houghton, Joseph Kerwer and George H. Wilbur. Winter's Metallic Paint Company, of Milwaukee; object to manufacture paint and to conduct a mining business; capital stock, \$10,000; incorporators, I. R. S. Isted, W. D. Halsted and F. B. Burrows.

North East, Pa.—Architect David K. Dean, of Erie, Pa.: First Presbyterian church; cost \$20,000. D. McDonald, contractor.

Phoenix, Arizona.—Real estate and building is interesting many parties at present, and the outlook for spring season is favorable.

Architect J. M. Creighton reports: D. Goodrich, one-story brick, 80 by 100 feet; cost \$11,000; under way, B. M. Cox, builder. For W. Reed, two-story brick, 50 by 80 feet, tin roof; cost \$10,000; under way, C. Forshee, builder. For Territorial Insane Asylum, two-story brick, 300 by 40 feet, tin and shingle roof; cost \$75,000; under way, Mr. Abernethy contractor. For Territorial Normal School, one-story brick, 80 by 90 feet, tin roof; cost \$11,000; under way, Patton & Creighton, builders. For F. Grant, one-story and mansard, brick, 30 by 47 feet; cost \$3,000; projected. For DeForest Porter, one-story frame cottage; cost \$1,500; under way, J. M. Creighton, builder.

Richmond, Ind.—Present outlook is good.

Architect Wm. S. Kaufman, reports: For Second Ward School District, just commenced interior finish of two-story brick school house, 94-6 by 88-9 feet, stone trimmings; cost \$16,500.

Ridgeway, Pa.—Architect David K. Dean, of Erie, Pa.: County jail and sheriff's house; cost \$40,000.

Salt Lake City, Utah.—The outlook for building for the coming season is not very encouraging. Many improvements are talked of, but are made conditional upon the political trouble now existing here being settled, which it is thought will hardly occur this year.

Architect John H. Burton reports: For Salt Lake Brewing Co., two-story brick building, 40 by 70 feet; cost \$5,000; Kauke Bros., builders.

Sheffield, Pa.—Architect David K. Dean, of Erie, Pa.: For Morris Straus, frame dwelling; cost \$3,500. G. W. Fassett, contractor.

Sioux City, Ia.—Present condition, quiet, on account of weather; outlook good.

Stockton, Wis.—Architect A. Druiding, of Chicago: For Rev. Alten, Catholic church, 40 by 75 feet; brick. Ready for bids.

Sun Prairie, Wis.—Architect A. Druiding, of Chicago: For Rev. A. J. Kuehne, Catholic church, 45 by 100 feet; brick. Taking bids.

Terre Haute, Ind.—The outlook, to say the least, is not encouraging, it is thought that no buildings of consequence will be erected this season, while the only work of importance now under way is that upon the court house and postoffice.

Architect W. H. Floyd reports under way and nearing completion: For W. J. Worrell, three-story brick building, 22 by 65 feet, tin and slate roof; cost \$4,000; J. W. Mitchell, builder. For C. Fairbank, pressed brick residence, 54 by 80 feet; cost \$20,000; ready for plastering. For Vigo county, stone and iron court house, 250 by 250 feet, slate roof; cost \$400,000; putting on roof, Terre Haute stone works, contractors.

Topoka, Kan.—Architect H. M. Hadley, reports: For J. O. Butler, two-story frame dwelling, 35 by 43 feet; cost \$2,000; plans on the boards. For D. M. McConnell, two-story frame dwelling, 30 by 52 feet; cost \$2,650; nearly completed. L. T. Mathews, two-story frame dwelling, 31 by 46 feet; cost, about \$2,500; under way.

Villisca, Ia.—Architect Geo. Pass, of Mankato, Minn., reports: For H. A. Kufus, two-story frame residence, 36 by 45 feet, slate roof; cost \$3,000; about to be commenced.

Wanakee, Wis.—Architect A. Druiding, of Chicago: For Rev. Gerend, Catholic church, 45 by 102 feet; stone. Taking bids.

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THE INLAND ARCHITECT AND BUILDER.

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No. 3

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THE *British Architect*, in its edition of January 29, paid a high compliment to American Architecture, the occasion being the reprint with the following comment of the illustration of the warehouse for Studebaker Brothers by Architect S. S. Beman, of Chicago, which appeared in THE INLAND ARCHITECT of November last:

A CHICAGO BUILDING—S. S. Beman, *Architect*.—We have selected this building for illustration as a very good type of the best modern American business premises. Moreover we seriously believe there are comparatively few of its kind to be found in our English streets. Here is a street frontage in which the maximum of light has been obtained along with breadth of surface and dignified simplicity. We think it is eminently satisfactory, and when we remember the fussy pilasters, moldings, foliated spandrels and gorgeous bosses of carving in some of our London streets, we are almost tempted to say too much of this modest and unaffected piece of American work. This is certainly the work we should apply for were we in need of an architect for a London street. We have reproduced the drawing from an excellent plate in THE INLAND ARCHITECT.

It is exceedingly graceful in this English architectural authority to thus recognize, and by kindly words of approval encourage the members of the profession in this western hemisphere, where, if the same advantages are not enjoyed, there is a comparative freedom from tradition that cannot but be looked upon with a certain wistfulness by those who are living among older and more exacting surroundings, and still wishing for a true progression in their art.

INDIAN education may now be said to have passed through the experimental stage, and seems to have set for itself definite lines of procedure, toward securing the greatest practical good to the greatest number. We say set for itself, because the present system that is recommended by those most experienced in Indian character and teaching, has grown out of long years of perverted effort of the "red shirts for the Hottentots" order of the good but impractical church missionary societies, that have so long believed that a clean shirt and a good book would make a civilized Indian. Fortunately, just as the western expression that "a good Indian is a dead one," is about to become an axiom, the practical wisdom of such men as the Hon. J. H. Oberly, of Illinois, the present Indian school superintendent, discovers that the intellectual capacity of the Indian is not equal to his natural inclination to laziness, and that the way to make him a good Indian is to teach him the art of performing manual labor. According to the latest report issued from the government press by Mr. Oberly, there are 200 schools supported by the United States government in which Indian children are educated, with an attendance of 8,143, beside other schools which are supported by states and religious societies, aggregating about 1,171 pupils.

THE report states as a fundamental principle that the Indian must be taught to work with his hands, and is in favor of compulsory education. Farming is chiefly recommended, but a knowledge of the use of tools generally seems to be the great need, making book knowledge an important but secondary element. If the government would go further, and when the Indian is educated give him responsible positions among his own people, make them Indian agents and the like, instead of the incompetent and too often vicious white men who have so long misrepresented the government among them, we could hope to see the Indian a progressive and

valuable citizen, instead of an exterminated savage. England has pursued this policy, and we find her Canadian Indians as educated, refined and well governed as the white people, among whom they live in peace and harmony. And what applies to the red American also applies to the white, but with greater force. Unless we, in this generation, make strong efforts toward establishing and maintaining institutions of practical, instead of theoretical training, the next will retrograde instead of advance in all the applied arts which, in this new age of progress, means a loss of vital force beyond computation. It is not a good sign for the future, however, when the president of the largest educational institution in the West says that it was with the utmost difficulty that he induced the faculty to establish a chair of chemistry, evidently thinking more of a Greek root than the entire field of physical science.

NOTWITHSTANDING all that is said and admitted about the mercenariness of clients, the crudeness of popular taste and the general lack of a critical appreciation of the merits of good buildings, the most serious obstacle to a due recognition of the architectural profession by the public is the unprofessional quality of a large portion of its membership, and often suggests a doubt whether they really know what professional conduct is. Witness the following transaction of recent date in a prominent western city, where a couple of architects, in their eagerness to secure employment, sacrificed every consideration of personal profit and professional dignity. In the city of A it is proposed to erect a \$50,000 building for the Young Men's Christian Association, and part of the funds have already been pledged. Regardless of all professional etiquette, the firm of B. & C., architects, addressed a written communication to the building committee, soliciting employment for this work, and offering to make "all the drawings, specifications, details, etc.," and to superintend the building *free of expense, regardless of what the structure may cost*. We are not informed of the final decision of the committee, nor of their opinion of architects who solicit work in this ignoble fashion, but the affair suggests a few very obvious reflections. As for the architects themselves, they could hardly occupy a more humiliating position than that they have voluntarily and gratuitously chosen in this transaction. Had they referred to similar buildings which they had designed and erected, or offered any other evidence of superior qualification for the work they solicit, their position would be different; but to make an appeal solely on the ground of the cheapness of their services, is, by implication, to confess that cheapness is their chief merit. A class of disreputable doctors often advertise "No cure, no pay," but these architects have gone a step beyond the doctors in offering to take no pay in any event.

CAPABLE talent does not go begging for employment in this gratuitous fashion. Architects who can command pay for their services are not apt to urge them as a gift on building committees. Moreover, employment secured in this mendicant fashion seldom brings any profit or honor with it. The self-abasement at the start invites a series of slights, snubs and bitter humiliations throughout. Good work fairly paid for brings most thanks and favors as well as most profit. The old plea that a man has a right to work for nothing if he chooses will not answer in this case. An architect is *ipso facto* representative of the architectural profession, and as such is not at liberty to solicit work or otherwise conduct himself in a manner calculated to bring his profession into public contempt. After he has been selected as architect for a proposed building he may contribute as large a donation as he chooses

to the cause, either in cash or in personal services; but to offer such donation or gratuitous service as an inducement for the award of the work to himself, is as disreputable in an architect as it would be in a lawyer or a physician. Such parties consciously set a depraved example, audaciously trusting to the superior honor and self-respect of their confreres for the success of their strategy. Were the custom to become general of soliciting work in this manner their sole ground of preference would be taken away. They would not dare inaugurate the practice, therefore, but for a confident belief that the most of the profession will be too honorable to resort to it under any circumstances. As for the committee, a sensible business man would be very apt to inquire whether it might not be wiser, safer, and ultimately cheaper to intrust their work to a thoroughly responsible and capable architect at a just compensation, than to risk the fifty thousand dollar building in the hands of those who intrusively offer their services for nothing. A good architect often saves more than the amount of his commission in his conduct of the work apart from the superior quality of the building. Moreover it is contrary to human nature to work without pay, and when people in any business make offers of this nature it naturally suggest suspicion of some stratagem by which they expect secretly to derive ample profits for their liberality at the expense of a confiding customer.

A TUBULAR tunnel under the waters of the straits of Northumberland, between Newfoundland and Prince Edward's Island, to connect the latter island with the mainland, is under consideration by the local government of the island. The plans which have been submitted to and approved by the committee of engineers, including Professor Bull, of New York; William McAlpine, C. E., past-president of the American Society of Civil Engineers; Walter Shanly, C. E., M. P., and other Canadian engineers, have been laid before the Canadian government to be acted upon at the next session of parliament. The difference, as explained by Professor Bull, between this tunnel and the Mersey and the Thames tunnels is that the latter cases the tunnels were dug through the ground, while in the present scheme an iron tunnel will be constructed resting upon the bottom. Surveys, four of which were made show a plain upon which the tunnel tube can be laid successfully, showing the depth of water from thirty-six to eighty feet. The tube which will be six and one-half miles long will be eighteen feet in diameter, made in sections and composed of chilled white cast iron four inches thick or more, according to the depth. This material, of which Hayden H. Hall, of New York, is the patentee, is said to be non-corrosive in sea water, and at present prices costs about \$14 per ton or about \$84 per foot of tunnel. The sections will be bolted together by inside flanges, making a water-tight rust joint. Where the depth of water will allow, the tunnel will rest on the natural bottom, otherwise a channel will be dredged. The tunnel is made necessary because of the impossibility of keeping up communication the year round.

THE small appreciation the average public officeholder has for things architectural is too well known by the monstrosities that are erected in all parts of the country in the shape of public buildings, structures that might have had some pretensions to architectural effect had not the influence of the public official been greater than that of the architect. But there is one building, the capitol of the state of New York that, though not free from this same political influence, as the senseless removal of that truly great architect, Mr. Fuller, some years ago indicates, is one of the finest public buildings

in the world, and now a handful of vandals in the shape of assemblymen, in search of a smoking-room, or as one of them was candid enough to explain, "he wanted a place to sit and smoke and look out of the window," for this propose that a room be partitioned off the grand and beautiful lobby, and a door cut through the wall into the assembly chamber. This would cost months of labor, and not only ruin the entrance to this magnificent hall, but take a support from the roof where there is none to spare. This latter fact might bring a just retribution if the mad scheme should be carried out; but the state would lose a beautiful building as well as a lot of bad politicians. Why the ephemeral action of a state legislature should have so much power in the destruction, as well as the creation of public buildings, which should be built for the centuries, is one of the mysteries of this enlightened age. In the case in point, it is certainly to be hoped that the people will call a halt before it is too late, to stop this contemplated piece of vandalism.

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BY ELLA S. BABBIT.

WE are a nation of extremists. Having seized upon an idea or principle, we carry it to its furthest limits. Like the little girl in Longfellow's rhyme, "When we are good we are very good, and when we are bad we are horrid." We possess no spirit of compromise; know no middle ground.

This one-sided and uncompromising spirit is exemplified among our architects. Two opposite and equally erroneous ideas of architecture are held by its American students and by people in general—the ultra practical and the ultra theoretical. The first-class, those holding the ultra practical idea, would degrade architecture to a mere trade, on a par with carpentry and shoemaking. The second class, the ultra theorists, ever remember that it is one of the fine arts, and accordingly they would make every tenement house or railway station a Gothic cathedral on a small scale, forgetting, as mortals too often do, the eternal fitness of things.

The first class is the most numerous. It embraces all people outside the profession except a few enthusiastic lovers of art, and includes too, many architects as well; it include those men to whom architecture is not a profession but a business; those who plan buildings so that the best appearance may be obtained for the least money; who work simply for the pay and are inspired with no love of the art or desire to improve the architectural standing of our country.

Outside the profession the people of America are sadly ignorant and indifferent to architectural principles. They know nothing of what comprises architectural fitness and beauty. A fringe of fret sawing around the verandah satisfies them as well as the most elaborate carving. When a church is to be built, instead of having the ceiling carved and painted, they paste *paper* carving and paper pillars and paper statuary on their walls. It is cheaper and looks just as well at a distance. Perhaps they send the money saved by this shoddy device to the heathen, little dreaming that by such ill-timed economy they are educating their own children, not only to be heathens from an artistic standpoint, but to be frauds and cheats.

I remember, when I was a youngster, we had our church "fixed over," and when we came to dedication we were surprised to find a door back of the pulpit. Knowing the position of the pulpit I used to puzzle my brains wondering where that door opened. With a child's curiosity I proceeded to examine for myself, and found it was only a *painted* door. The effect of that discovery upon my mind was never effaced. Vain the teachings of truth and sincerity from that pulpit; the church itself taught deceit. In the upper story of our own house I noticed a pair of blinds that were for ever closed. In solving the mystery I discovered that they were blinds without windows! It would have been well if my practical father had omitted the gilding on our parlor walls and put a window behind that blind. In being too practical we may overreach the mark. Useless is it to preach truth in a church that is a standing falsehood; to instruct our children in honesty when our very houses teach them to deceive, to wear a false appearance.

If only the world could be instructed, if people could see that they can be practical in other ways than in saving money by shoddy building! If only fathers and mothers could realize that in constructing their houses they are educating their children, teaching them the most lasting lessons in honesty or deceit, as well as in true artistic taste! However small or inexpensive a building, it can be perfect in symmetry and proportion, and in the smallest details of color combination.

Thus far the fault has been one of carelessness or ignorance. It is not because our people are too busy or too niggardly to encourage good architecture. The trouble is their eyes have never been opened. They are practical people; and when they are brought to see that good architecture has a real advantage over shoddy, they will have good architecture and no other.

As to the ultra-practical architects, they are, at present, I suppose, a necessary evil. They exist in proof of the maxim that the supply must equal the demand. When people are educated up to higher views of the subject, this superficial and soulless class of architects will disappear from off the face of the earth. For the present let them read and ponder well the words of Ruskin: "Architecture is not merely a science of the rule and compass; does not consist simply in the observance of just rule and fair proportion. It is or ought to be a science of feeling more than of rule; a ministry of the mind more than of the eye."

Some one has said that to be an architect one must be a metaphysician. Perhaps there is truth in the saying, but coupled with it should be the words: "To be an architect one must be a faithful and skillful handicraftsman." As was stated at the beginning, the ultra-theoretical architects are as sadly in the wrong as the ultra-practical. This ideal and altogether utopian way of viewing and practising the profession is the result of a narrow-minded and excessive study of the artistic notions of our day as they are set forth in the various books on art and æsthetical magazines. From these our young and enthusiastic architects imbibe, perhaps, a true appreciation of the art, but neglect to see that their architectural "grace be duly seasoned with salt." We find the expression of these ideas in the pretty, doll-house buildings, so common in our smaller cities; frail, pretty structures they are, but more appropriate to be placed on the high shelf of an art museum than for the wear and tear of every day life.

True architecture, like true art of any kind, is not the development of æsthetic fancies or of elegant trifling. Let the enthusiastic and theoretical young architect remember that to be successful in his profession he must possess something more than fine ideas and knowledge borrowed from books. He must have a realizing sense of the practical needs of real people in real houses. The practical people who consider architecture a trade are not altogether wrong. It is just possible that one may aim too high as well as too low. The common work which evidently aims at no pretension of art, yet possess something of artistic charm, is more pleasing than a work planned on a grander scale but deficient in its execution.

What American architects need and American people (for the architects will meet the requirements of their clients) is to avoid both the over practical and the over fanciful in their buildings. Steering clear of both extremes they should seek that happy middle ground where house-building, the trade that meets our actual wants in the most practical way, and architecture, the highest and noblest of the fine arts, join hands.

Old Bits of Baltimore.

BY W. CLAUDE FREDERIC, ARCHITECT, BALTIMORE, MD.

THE City of Monuments does not impress a stranger as being very ancient. The few old buildings and quaint bits of architecture we have are slowly but surely falling a prey to the insatiable greed of the property speculator. One of the most noticeable features of the older streets in Baltimore are the stepping-stones, as shown in the sketch of the University of Maryland. These ancient modes of crossing wet streets were found so very convenient that they have been allowed to remain, even in streets well supplied with sewer openings, and, as the city is very hilly, the water in a heavy rain storm comes rushing down into the valleys, quickly flooding the streets, and it would be almost impossible to cross some of them were it not for these stepping-stones.

The enormous old wooden pumps, also, many of them covered with moss, look quite picturesque, especially when one sees several pretty, laughing maidens getting water from them in the streets of "Old Town," many of the older residents yet fondly believing that the water derived from this source is purer and better than that introduced by our splendid new supply, which is so vast that over three hundred millions of gallons daily runs to waste over breast of the dam.

In the center of the city, surrounded on three sides by the lofty rear walls of the well known Barnum's Hotel, stands the old Banner Club House, built in 1780. It was built—as was many another old building here—of imported brick, and was covered with a thick coat of plaster, which has long since cracked off in many places. This building was, for years, thought a marvel of architectural beauty and convenience. Here it was that the old beaux and belles used to meet by early candle light for their musicales, and to dance their favorite minuet. It was a favorite resort of Washington and La Fayette when in the city, and was also noted for its terrapin suppers. Its was originally surrounded by fine grounds,

and two of the old forest trees yet remain to shield it from the wintry blasts.

In St. Paul street, about two squares from the old Club House, is the old Masonic temple, now used by the equity court. This was one of the first Masonic buildings in this country, and is, even yet, a very tasteful building, built of massive blocks of yellow sandstone, and was, in its day, very convenient for the purposes for which it was intended.

In the upper right-hand corner of the sketch will be found the old "Kaminskay Inn," the oldest building in Baltimore at the time it was destroyed by fire a few years ago. It was built in 1750, and in its day was the favorite resort of celebrities visiting "Baltimore Town." This sketch was taken from a photograph, as also the following expressive notice that was placed upon the front of the building: "Ye stoop is only to bee used by ye qual-itee folkes."

On Green street is the old Egyptian gateway of the Westminster Churchyard. This gate was placed in its present position about thirty years ago, and was taken from some very much older place. I have been unable to ascertain from whence it originally came. It is about ten feet high, and built of very porous grey sandstone, and is now quite ruinous. In this churchyard are the remains of Edgar Allen Poe, of "Raven" fame.

I believe that Baltimore is the only city in the United States that has a bona fide coat of arms. It was founded on the arms of the Lords of Baltimore, and the motto—"Manly deeds, womanly words"—is also taken from their arms. The supports—a farmer and a fisherman—are quite appropriate to Maryland, the state arms being the same, only without the *monuments*.

At the upper end of Broadway, in the beautiful grounds of the Samuel Ready Asylum, stands what is probably the only monument to Christopher Columbus in the United States. Tradition handed down, somewhat imperfectly, the history of this ancient monument, and only the outlines of the story can now be gathered. It was erected in 1784 by Count de Amador, who was then the French consul for Maryland and Virginia. On the twelfth of October of that year it was dedicated to the discoverer of America with appropriate ceremonies. The material of which the monument was constructed was probably brick, covered with a thick coating of some impervious cement, capable of withstanding the ravages of time, much better than marble, brownstone or any of the modern building materials. The shaft now has a soft yellow tint, and on the north side is almost covered with a delicate green moss. On one side, deeply engraved, is this inscription:

CHRIS COLUMBUS
MDCCLXXXIV.

The monument is an obelisk in form, about thirty-five feet high and eight feet in diameter at the base. A widely extended and popular French organization of that period was the "Sociedad Latino-Americano," the purpose of which was the perpetuation of the name of Columbus and the memory of his discoveries. The society met regularly at the mansion of the Count de Amador, on his estate, then about two miles from town, and the monument was planned and erected in furtherance of that aim. For many years after the departure of the General de Amador, and while the estate was in other hands, the monument was practically hidden from public view, owing to the trees and underbrush that grew up around it in this neglected part of the grounds. It remained in this condition until 1862 when the present owners of the property had the underbrush removed and the grounds once more put in good order, and now the old monument is again receiving public attention. It was often said by uninformed persons that this monument was built to commemorate a favorite horse of the count, and this story, for years, gained currency, but was without foundation, as the inscription shows.

On Edmonson avenue, extended, about a mile west of the city limits, stands an old lodge gate, with the remains of what was once a fine avenue, but everything connected with it has now disappeared but the old gateway, and this, too, is soon to be destroyed to make room for modern houses. This estate formerly belonged to the Duchess of Leeds, but is now divided up into building lots.

The university building shown was, I believe, planned by Latrobe, one of the architects of the capitol at Washington, as well as a number of the principal public buildings of Baltimore. It is now used for the Baltimore Medical College, and the great dome is over the principal dissecting-room.

There are a number of other quaint old buildings, stone bridges, mills and old milestones around the city, each possessing a peculiar interest of its own.

The Modern Mechanic.*

BY E. F. FASSETT, ARCHITECT.

THE lack of competent, reliable and honest builders and mechanics, the want of interest taken by them, not only as to their own education and advancement, both theoretical and practical, but to those who are to follow them in the building trades, is fast becoming a question of great moment to the building public, and more especially to the architectural profession.

Year by year the older builders are leaving their field of labor. Are their places being filled with such men as are now and will be in the future required? We must answer in the negative. Comparing the workmen of *this* age with those of former ages, we find that the modern mechanic is far inferior in practical construction and handiwork. Why is this?

The former took great pride in his work, and strove to make each and every piece of it superior to his *preceding* production. The latter seems to work for mere personal greed, with no ambition to perfect this work as an art. With a fair knowledge of drawing the former could and was expected to make his own working plans from the architect's scale details. He felt that a great portion of the responsibility of the work fell upon *him*, and therefore took great care in construction.

He had served his bounden time as an apprentice, and under faithful guardianship learned to love and respect his calling. As he advanced in practical knowledge, better and more difficult works were entrusted to him. Before he could gain admission as member of any trade guild, he was obliged to pass examinations to prove worthiness and proficiency.

Our nineteenth century mechanic has but very little knowledge of *drawing*, many of them not being able to read and understand the simplest mechanical sketch. He does not bother his head *to lay out his work*, as long as the architect is willing to do it for him. He thinks the time served as an apprentice wasted, so long as his Trade Union says that his wages shall be equal to those who are better educated than himself.

What is the reason of this decline?

1. Because the system of apprenticeship has been almost completely *abolished*.

2. The manner of letting work to the lowest bidder regardless of his financial and mechanical resources. Because the owner wishes to get *more* for his dollar than it will actually buy.

3. The attempt of the Trade Unions of the present day to prevent the employment of but a limited number of apprentices. Their outrageous and communistic laws, that a scrub shall have equal rights, protection and wages with those who have served several years of patient study, labor and toil. And last, but not least, is the general contractor, with a smattering of legal, medical and theological knowledge; a leader in ward politics; a shrewd calculator in buying and selling notes; having a strong ambition to become a popular, political leader; he imagines that he, above all others, is the one to excel as contractor and builder, with little care as to the strength and stability, the thoroughness and finish of the work he has under way, no pride that the building should be the mark of his mechanical ability, he enters the field for the sole purpose of trading on the labor of his help and the commission he may receive from material men. He strives to get all of the owner's money he can, giving as little in return for it as possible. How are these conditions to be bettered? How shall they be brought to the attention of the mechanic? What can be done to induce him to aim at perfection, to bring his work to a higher standard? are questions difficult of satisfactory solution. Some suggestions may be given, none of which, all things considered, will be quite satisfactory.

No superintendent or mechanic should be given employment in the constructing or finishing public or private works until he shall have given a guarantee that he is fully competent to perform the duties required of him.

That the architect should take a firm and decisive stand against the letting of contracts to the lowest bidder, simply because he *is* the lowest.

That he should insist upon the discharge of any workman when he has sufficient reason to believe the man is not competent or fit for his position. By rejecting each and every piece of work that is not done in a perfect and workmanlike manner. By these means the mechanic may learn that he *must* improve, and strive toward perfection in his special line of trade, or seek some other means of livelihood.

To *help* the man, we must seek some way to better educate him *in* this special line of building trades.

Of necessity, we must look to the humbler classes for our coming builders and mechanics. It is our duty to see that they have the opportunities to receive a satisfactory education at the least possible expense to themselves. If the present trades unions will not assist in this work, and the contractor refuse to take the care and responsibility of teaching an apprentice, we must, of necessity, resort to other, and perhaps better, means.

Strictly technical schools are without doubt the best for the purpose, but the public have not been taught the necessity of such institutions. Until they are we shall be compelled to rely upon our public schools and state universities. Training classes should be established in all of them, where the pupil can receive instruction in drawing and the practical use of mechanical tools. In our state universities higher classes in mathematics and practical mechanical construction should be formed.

Among our charitable and benevolent institutions none are better able to cope with this matter than the Young Men's Christian Associations. They have done much good in many ways, and can do still more, by opening free evening schools, for the laboring men especially. If the apprentice or student shall have completed a full course in any training

* Paper read before the second convention Missouri State Association of Architects, January 12, 1886.

school, he should receive preference in employment where the same can possibly be given. He should as well be protected by law from abuse and insult from trades-unions and striking gangs.

In the sixteenth and seventeenth centuries the members of trade guilds were allowed many rights and advantages, which poorer or less skillful workmen could not procure. Under the reign of Numa Pompilius, the bridge builders, owing to the great need of such workmen, were granted special privileges. Let the trades unions open evening schools and classes for the members, establish a series of lectures and debates, and they will accomplish more good to themselves, and their members in the end receive better wages and greater respect by the public at large. As man increases in knowledge, just so much he increases in the high esteem of his fellow man.

Lastly, upon the architect rests a large share of the work to be done; on him rests the protection to life and limb; upon him devolves the task of educating the general public to a higher and nobler appreciation of the greatest of arts. It avails him nothing if he has not the workmen to carry his ideas into proper execution. He should carry himself with dignity and standing that will gain for him the confidence and respect of his fellow man, stretching forth, at the same time, his hand to assist those who are on the lower rounds of the ladder. Invitations might, with propriety, be given to the mechanic to attend meetings of local and state societies, when matters are to be considered which are of special benefit to him. He should look with favor upon the workman, giving him his instructions cheerfully and willingly, and giving him due credit and praise when he has done the best that his ability permits.

We hope to hear opinions and discussions upon this matter from able ones of this Association. That the interest you all must have will gather in strength, until something will be brought about to stimulate our worthy artisan to the best there is within him. He aims too low who aims beneath the stars.

Every art has an origin divine. It is this divinity in the art that holds, fascinates and cheers. He works for dollars and cents. He should work to serve his age, to help build the temple divine. How beautiful, how systematic, without jar or discord, was the building of *Solomon's Temple*. Each part perfect in itself. Each part suited to the wants of another, perfected before presented to the spot chosen for erection, all inferior matter was thrown aside, only the best used, every fraction unfitted rejected. After each part was ready we can imagine the erection, slow, true, thorough, exact, beautiful; no noise, no dispute, no profanity was about the place, that place designed by the architect Divine. This temple did not come in a day, like a mushroom. It took years for its completion, yet when it was done it was a glory to God, a divine ideal perfected.

Let us not, in our own work, depart from this thought, that even in a stone, that seems but a useless block, there is within it a beautiful statue that is able to signify wisdom, goodness, strength.

Fireplace Construction.

A PAPER on this subject was read recently at the Royal Institute by Mr. T. Pridgin Teale, F. R. C. S., of Leeds, and the following report is taken from the *Building and Engineering Times*: Mr. Teale explained that the principle of fireplace construction which he had been working out for the last three or four years had been written about and acted upon in the last century by Count Rumford, the founder of the institution. Mr. Teale pointed out that three evils result from the prevalence of bad principles in construction: 1. Waste of fuel and loss of heat. 2. Excessive production of soot and smoke. 3. Large addition to ashpit refuse by cinders, which are really unburnt, and therefore wasted fuel. The greatest offenders are the ordinary register grates. Iron all over, back and sides and roof, they are usually set in a chamber open above to the chimney, and imperfectly filled in, or not filled in at all, with brickwork. The heat escapes through the iron to this chamber, and thence is lost. Another fault is that the "register opening," in other words the "throat of the chimney," being immediately above the coal, submits the burning fuel to the full concentrated force of the current to the chimney, converting the fire into a miniature blast furnace. The second result of faulty construction in fireplaces is "undue production of smoke and soot." Smoke and soot imply imperfect combustion, and to this two defects in a fire mainly contribute one, too rapid a draught through the fire, which hurries away and chills below burning point the gas rising from the heated fuel. The other defect is too cold a fire, i. e., too small a body of heat in and around the fuel, so that the temperature of the gases is not raised to a point at which they will burn. A third result of bad construction is the "production of cinders." With good coal, cinders are inexcusable. They are unconsumed carbon—coke, and imply a faulty fireplace.

Mr. Teale then further explained the principles at which he arrived, as embodied in the following thirteen rules, which will probably interest many of our readers:

MATERIALS.—As little iron as possible. The only parts of a fireplace that are necessarily made of iron are the grid on which the coal rests, and the bars in front. The "economizer," though usually made of iron from convenience in construction, might be of earthenware, and so would be more perfectly in harmony with this rule.

SIDES.—The back and sides of the fireplace should be of brick, or fire-brick. Brick retains, stores and accumulates heat, and radiates it back into the room, and keeps the fuel hot. Iron lets heat slide through it up the chimney, gives very little back to the room, and chills the fuel.

BACK.—The firebrick back should lean over the fire, not lean away from it, as has been the favorite construction throughout the kingdom. The lean-over not only increases the power of absorbing heat from rising flame—otherwise lost up the chimney—but the increased temperature accumulated in the fireback raises the temperature of gases to combustion point, which would otherwise pass up the chimney unconsumed, and thus be lost.

BOTTOM.—The bottom of the fire, or grating, should be deep from before backwards, probably not less than 9 inches for a small room, nor more than 11 inches for a large room.

COVINGS.—The sides of "covings" of the fireplace should be inclined to one another as the sides of an equilateral triangle.

LEAN-OVER.—The "lean-over" at the back should be at an angle of 70 degrees. Commencing at the level of the top of the front bars, it should extend almost to the throat of the chimney, which, as a rule, will be about 28 inches from the hearth, or 16 inches from the top of the fire, and should extend so far forward that the angle where it recedes toward the chimney should be vertically over the insertion of the cheeks of the firegrate. This will be from 3½ inches to 4½ inches from the front of the fireplace, according to the size of the grate.

SHAPE.—The shape of the grate should be based upon a square described within an equilateral triangle, and the size to vary in constant proportion to the side of the square. For a moderate room, 8 inches determines a very useful size; for larger rooms, 9 inches, 10 inches, or even 11 inches, may be necessary. An area of grating of 100 inches in the square of the corners would give a grate fireplace large enough for a room 20 feet by 25 feet. The manner in which this principle can be worked out can be easily seen by studying the diagrams. This rule secures sufficient depth from front to back, and a constant proportion between depth and width, whatever be the size of the grate. Whenever a grate proves too large for a room, and in summer, when a smaller fire is needed, the size should be reduced in width by firebricks, the full depth being retained.

GRATINGS.—The slits in the grating, or grid, should be narrow, perhaps ¼ inch for a sitting-room grate and good coal, ⅜ inch for a kitchen grate and bad coal. When the slits are larger, small cinders fall through and are wasted.

BARs.—The front bars should be vertical, that ashes may not lodge and look untidy; narrow, perhaps ¼ inch in thickness, so as not to obstruct heat; and close together, perhaps 1 inch apart, so as to prevent coal and cinder from falling on the hearth.

RIM.—There should be a rim 1 inch or 1½ inches in depth round the lower insertion of the vertical bars. The object of this is to conceal the ash at the bottom of the fire, and to enable the front cinders to burn away completely by protecting them from the cold air. This rim contributes greatly to tidiness, and, as a rule, will prevent the need of any sweeping-up of the hearth during the day.

SHIELD.—The chamber under the fire should be closed by a shield or "Economizer."

ASH PAN.—Whenever a fireplace is constructed on these principles it must be borne in mind that a greater body of heat is accumulated about the hearth than in ordinary fireplaces. If there be the least doubt whether wooden beams may possibly run under the hearthstone, then an ash pan should be added, with a double bottom, the space between the two plates being filled with artificial asbestos, "slagwood," 1½ inches in thickness.

GENERAL.—A fireplace on this construction must not be put up in a party wall where there is no projecting chimney breast, lest the heated back should endanger woodwork in a room at the other side.

Mr. Teale concluded his paper with the following observations relating to the danger of fire: Seeing that improved fireplace construction involves increased heat about the hearth, an actual danger of fire will be created where the hearthstone rests on wood, unless the hearth itself be protected. It was, therefore, my duty to find out a means of protecting the hearth. With this view experiments have been made with ash pans with double bottoms and a small air-space between the ash pan and the hearth.

Our Illustrations.

Old bits of Baltimore; sketched by W. Claude Frederic, architect.

Club house, for the Farragut Boat Club, of Chicago; by Robert H. Rae, architect.

Design for gate lodge. Competitive sketch, second prize Chicago Architectural Sketch Club; by W. G. Williamson.

Residence, exterior and interior, of architect F. S. Allen, at Streator, Illinois. The house is picturesquely located on the brow of a bluff, overlooking the river.

The Commercial bank and office building, for George Spencer & Co., Duluth, Minnesota; by W. L. B. Jenney, architect, Chicago. Size 50 by 115 feet, Anderson pressed brick and cutstone trimmings. The building, which is situated directly opposite the new board of trade, is the finest office building in the city, and a very material advance over the other buildings of similar purpose, as well as an index of the rapid increase and prosperity of the city. W. E. Hale & Co., of Chicago, furnish the elevator. The total in cost is about \$80,000.

Burlington, Cedar Rapids & Northern Railway general offices; by J. S. Taylor, architects, Cedar Rapids and Des Moines, Iowa. Building 138 by 65 feet at extreme width; exteriors of local moine pressed brick, with trimmings of blue Bedford Indiana stone, polished Sioux Falls quartzite at sides of entrance. A central hallway leads back to the stairway which is in a central court, under a large skylight. Finish of yellow pine; vaults on each floor; heated by steam. Gives accommodation to all the officers and their clerks; cost about \$40,000.

Residence for Geo. A. Foster, Evanston; by G. Isaacson, architect, Chicago. This building is situated on Chicago avenue, south of Clark street, Evanston, and is built of wood, with brick cellar. The entrance leads into a spacious hall with grand staircase and arches, and elaborate stained glass windows. The parlor, sitting-room and dining-room are on the south, with wide sliding-doors between each, and into hall. The kitchen and back hall are placed back of main hall. Second story has five chambers, and bathroom and closets. The first story is finished in hardwoods, red oak in hall, natural birch in parlor and sitting-room, and antique oak in dining-room. The kitchen is yellow pine, and the chambers in white pine, all handsomely polished. The cellar has laundry, furnace and fuel rooms, and cold cellar. The cost, complete, is \$6,000.



Chicago Real Estate Board.

THE third annual banquet of this, the largest and most progressive organization of real estate owners and agents in the West, took place at the Palmer House on the evening of the 4th inst.

Two hundred guests sat down to a peculiarly richly appointed table and discussed a menu that was faultless. The tables were loaded with flowers, with here and there a setting, each symbolizing something appertaining to their profession. Those most marked was a log hut with a swinging sign above it, with swamp ground around, illustrating an old Chicago tavern in 1836. Another was a plot of ground with a fence of tuberose, with the regulation "for sale" sign, the entire piece being like many of the descriptions published of real estate, "quite flowery." The menu was elegantly gotten up, with a title page designed, it is understood, from suggestions made by the wife of a prominent member of the board, and which excited general comment.

The toasts, comparatively few, but all responded to ably, were not only exceedingly interesting, but humorous.

The speech of Will W. Baird, son of Lyman Baird, president of the board last year, and one of the oldest and more prominent members, made decidedly the brightest and most witty speech of the evening.

The Imperial Quartette, a delightful quartette of gentlemen deservedly popular, sang many songs which were greatly appreciated.

Mayor Carter H. Harrison and the Reverend Dr. Geo. C. Lorimer sat together, strongly suggesting "church and state."

The mayor spoke of the needed public improvements, but stated that Chicago was constitutionally unable to borrow money, all improvements being paid for from current funds, and until the law was changed very little could be done, and compared Chicago's \$2,000,000 of taxes with New York's \$23,000,000, and but twice the population.

S. H. Kerfoot was introduced by the chairman as a veteran who was a member of the first real estate organization, and he spoke long and eloquently upon the situation past and present.

Other addresses were made by various members, the toasts being as follows:

"Words of Welcome," Pres. E. A. Cummings.

"Our Guests," Hon. Thomas B. Bryan.

"The Honest Real Estate Agent; the Reliance and Trusted Land Steward of the Judicious Real Estate Owner," Willis G. Jackson.

"The Real Estate Owner," Ferd. W. Peck.

"The Law," Gen. I. N. Stiles.

"The Chicago Real Estate Board," Norman T. Gassette.

"The Last Words" were spoken by the Rev. Dr. George C. Lorimer. Dr. Lorimer spoke eloquently of the lack of moderate-priced houses for the middle classes, and said that this was driving the respectable people to the country, and fostering the bad classes.

THE ORGANIZATION.

The history of this organization is, in brief, that February 21, 1883, articles of incorporation were issued by the secretary of the state of Illinois to William L. Pierce, William A. Merigold and Edmund A. Cummings, forming the Chicago Real Estate and Renting Agents' Association, the three gentlemen named being directors. The name was subsequently changed to the Chicago Real Estate Board, with the following as its object:

The object for which this Association as formed is to enable its members to transact their business, connected with the buying, selling, renting and caring for real estate, and the loaning of money upon the same, to better advantage than heretofore, by the adoption of such rules and regulations as they may deem proper, and by enabling them to take united action upon such matters as may be deemed for the common good, and by such other means as may be determined upon by its members, which resolutions were adopted by a majority of the members present at said meeting.

The rules were amended to take in real estate owners as members. The fees and dues are now \$100 for each agent member until the board numbers 150 when it will advance to \$200. The fee for associates is one-

half this sum. The annual dues are \$30 for agent members, and associates one-third of this sum, dues to be paid semi-annually, in advance. The following are the Board's schedule of charges:

FOR NEGOTIATING AND MAKING LEASES WHERE RENTS ARE NOT COLLECTED BY AGENT.

Stores and business property, lease not exceeding three years, charge on amount first year's rental.....2½ per cent.
When term exceeds three years, add for each additional year.....1
Residence property, on total rent for term of lease.....2½ "
Ground leases, term not exceeding fifty years, on total rent for first ten years.....2½ "
(If appraised each five years, charge to be computed for the ten years on basis first five years' rental.)
Ground leases exceeding fifty years, on appraised value of property at date of making lease.....2½ "

FOR MAKING SALES OF REAL ESTATE.

On a Sale for \$3,000 or less.....5 per cent.
On a sale for \$10,000 :
The first \$3,000.....5 "
Excess over \$3,000.....2½ "
On sale exceeding \$3,000.....2½ "

The board now numbers among its members the leading real estate agents and owners, and is becoming a power for good in the correct government of the great real estate interests of Chicago.

ABSTRACTS OF TITLE.

At the noon call of the real estate board, on February 19, the subject of the recent resolution of the county board to withdraw all privilege from the private abstract firms and manage the entire business was considered.

The meeting was called to order by President E. A. Cummings, about twenty-five members being present, who stated that it was suggested that a special meeting be called to take action upon the resolution of the county board in regard to abstracts. Mr. R. C. Givins said he believed this action if carried out and the private abstract firms abolished, would tend to withdraw foreign capital from the city. The abstract firms were doing the work with greater accuracy than the county could, as they employed 150 men, and there were scarce twenty experts in the city who can make abstracts properly. The effect of withdrawing these firms would be that it would be impossible to get an abstract in a year, to the greatest injury possible to business. Mr. Givins suggested that the board secure a room as near the court house as possible, and have every deed entered here and filed by the abstract firms. Although the county can exclude private individuals from abstract department, it is open by law to the owners or their attorneys. This plan would secure minutes of all deeds filed, and head off the other movement and enable the firms to make continuances.

Mr. Farlin indorsed Mr. Givins. It might not take the county a year, but a long time to make out abstracts. The county service was so inefficient that many owners would not take the recorder's abstracts. Mr. Talins moved, seconded by Mr. Bay, that a meeting be called by the secretary for Monday at three o'clock, and invite not only members of the board but owners and attorneys interested in the matter, to consult and perhaps take some definite action.

Mr. Mead moved that a committee be appointed to draft a set of resolutions on the subject to be presented at the meeting on Monday, and suggested Messrs. Morey, Givins and Baird, to which was added Messrs. Cummings and Mead, with Mr. Morey as chairman.

At the special meeting of the board, February 22, President Cummings occupied the chair, and a general expression of opinion was advanced by a large number of those in attendance. The following resolutions were presented by the committee. They were read by Mr. Morey, who moved their adoption:

WHEREAS, In pursuance to a resolution adopted by the board of commissioners of Cook county, the recorder has issued a notice to the different abstract firms, companies and corporations that on Saturday, February 27, 1886, they must withdraw their employés from his office, and that after that date he will deny access to the original instruments and records in his office to all parties desiring to make copies or abstracts of same for speculative purposes or for their own private gain; and

WHEREAS, The execution of such order will create a monopoly in the making of continuations of title in the hands of the recorder, thus crushing out the competition that now exists; and

WHEREAS, The condition of the abstract department of the recorder's office, as shown by the report of the expert employed by the board of commissioners, is not such as to command the confidence of the public; and

WHEREAS, With the great and increasing call for the examinations of title, averaging last year in the combined abstract offices over 75 orders per day or 22,500 separate abstracts yearly, it is an utter impossibility for any one office, working from one set of books, to supply this enormous demand; and

WHEREAS, The execution of such order will interfere with the transaction of real estate business and loaning of money upon real estate to an extent that will be disastrous to both owners and agents; and

WHEREAS, It is for the public good, as shown by past experience, that there should exist as many copies or abstracts of the public records as possible; it is

Resolved, As the sense of this meeting, that said order of the recorder should be rescinded, and the resolution under which it was made repealed.

Resolved, That a committee of five be appointed to prepare and present a petition to the honorable board of commissioners of Cook county, respectfully asking them to repeal said resolution and allow persons engaged in the making of abstracts of title the same privileges in the recorder's office they have enjoyed for many years.

The motion was then discussed. Mr. I. P. Wilson, the attorney for the board, thought that the system in vogue greatly facilitated the business of buying and selling real estate. The course suggested by the board of commissioners would make a monopoly in the hands of the county recorder. It was of interest to have as many abstract firms and as much competition as possible.

Mr. R. C. Givins thought there would be a calamity if the order was enforced. It would stop building, as many buildings were erected on loans, which could not be procured except upon the abstracts of two firms. The whole wealth of the great city had been dependent, since the fire, on the abstracts of title. They must have abstracts which could be relied upon. The recorder had no interest to keep up the records as a private abstract firm had. Some abstract firms had as many as seventy orders for abstracts in one day. If they should load up the recorder's office with one hundred orders, it would require three months to get out an abstract.

Mr. M. R. Barnard said it was questionable whether the county board had the right to make such an order. It was impossible for the recorder to make abstracts in every case, as he had not the records. The recorder

was a political office-holder, and could not make credible abstracts. He did not make credible abstracts. He did not take the word of others for this, as he knew it himself, two entries having been left out of an abstract which he had ordered.

Mr. N. N. Cronholm said the records should be open in order that interested parties might have an opportunity to see them. He had tried to gain access to the records, and discovered that he had to bribe employés in order to accomplish his purpose. He had discovered that the abstract firms were more accommodating, and had gone to them for his abstracts and information.

Mr. F. H. Colyer said the abstract business was a question of confidence. People had confidence in certain abstract firms and patronized them.

Mr. Charles Pope said it was a question for the whole people. The recorder could not be held liable for errors made. It was a question of responsibility and reliability. He exhibited an abstract made by the recorder in 1885, in which he showed two errors. Such abstracts were submitted to the lawyers, who were blamed because they objected to the recorder's abstracts.

Mr. J. W. Farlin said before the recorder engaged in the abstract business he should have his books correct.

Mr. J. P. Galloway exhibited a deed which was recorded by the recorder, conveying property in Nebraska, which was not signed nor acknowledged, but for which a charge of sixty cents was made. He had concluded that the recorder would record a wash-bill if it should be taken to him.

Mr. Reynolds referred to the order as a direct menace to every citizen of Cook county. The recorder and his employés were there for the purpose of imparting information to the whole people.

Mr. Ernst Prussing opposed the creation of a monopoly of any kind, and that was what was meant by the order of the county board. It was not a question of mistakes, but one of responsibility. It was beneficial to have several abstract firms. The recorder's office was not in condition to make abstracts. They should not make a wrong move, as they might build up monopolies.

Mr. Thomas B. Bryan was opposed to having abstracts made by elected officers, as it had always been a failure. The question was, were they to encourage a move that would paralyze business? At the present time it was impossible to furnish a perfect abstract of title from the recorder's office. The enforcement of the order of the county board would result in time in an absolute paralysis to the real estate and loan business.

The president read the resolutions again, after which they were unanimously adopted.

The president appointed as the committee to ask the county board to repeal the order passed Messrs. Thomas B. Bryan, H. C. Morey, J. P. Wilson, W. D. Kerfoot, and M. R. Barnard.

Mr. M. R. Barnard submitted the following resolution, which was unanimously adopted:

WHEREAS, The best interests of the public are served where the greatest competition exists; and

WHEREAS, Under the existing condition of the records of Cook county, the enormous number of documents filed averaging now over one hundred thousand per year, it is practically impossible for any new persons, firms, or corporations to enter upon the business of making title examinations, be it

Resolved, As the sense of this meeting, that the tract indices to the records in Cook county should be kept posted up and placed with the public recorder's office of said county, and made accessible to all persons desiring to examine or copy the same.

The committee met and planned a thorough canvass of the business district for names to support their petition, and by the appointed time had secured the names of four thousand one hundred and nine property owners, the committee finding that the more property a man possessed, the more willing he was to sign.

On the day of the limit given by the commissioners, both they and the recorder were enjoined not to proceed in the matter. The latter was also enjoined not to complete certain abstract books, the point being to test his authority to make abstracts, or of the county board to require him to do so. The county filed a motion of withdrawal of the first injunction, but the time for the argument has not been set.

The board met in monthly session on the 3d instant. The following new members were received: Active—M. E. Grenebaum, George G. Newbury, Percy W. Palmer, Henry G. Foreman, W. F. Lubeke, J. Donnersberger, D. S. Place, William Loeb, and Byron A. Baldwin. Associate members—P. L. Garrity, B. Hagerman, and F. B. Peabody. H. C. Morey reported that the special committee on the abstract controversy had obtained 4,109 signatures to the petition which they presented to the county board. That body had referred the petition, which, in brief, asks that abstract firms shall have access to the records of the recorder's office, to the Committee on Court House and Records. E. A. Cummings, president of the board, stated that he had received a communication from the Committee on Records requesting the board to appoint a committee to confer with them on the abstract question. M. R. Barnard, H. C. Morey, W. L. Pierce, J. F. Wilson, and E. A. Cummings were constituted such committee. R. C. Givens reported that the Committee on Advertising recommended that the board patronize the papers granting cheap rates.

Norman T. Gassette urged the importance of the auction sale of real estate at Central Music Hall, March 18, and criticising members who had refused to list property. E. S. Dreyer, S. M. Moore, and N. A. Merigold were appointed a committee to investigate the reliability of all the insurance companies in the city and report a list of the same for the patronage of the board. A committee was also named to draft an equitable brokers' contract for the sale of property.

Association Notes.

WESTERN ASSOCIATION OF ARCHITECTS.—Convention will be held November 17, 1886, at Chicago. John W. Root, Chicago, secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Thursday of every month, at 15 East Washington street, Chicago. Annual meeting first Thursday in October, 1886. Louis H. Sullivan, Chicago, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at St. Louis on the second Tuesday in January, 1887. Thomas B. Annan, St. Louis, secretary.

KANSAS CITY SOCIETY OF ARCHITECTS meets Monday afternoon of each week, at 4 o'clock. Annual meeting second Saturday in April, 1886. F. B. Hamilton, secretary.

The ARCHITECTURAL ASSOCIATION OF IOWA meets second Wednesday of August, 1886. C. H. Lee, Des Moines, secretary.

The ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 4, 1887. Irving W. Kelley, Minneapolis, secretary.

KANSAS STATE ASSOCIATION OF ARCHITECTS meets at Topeka on the third Tuesday of January, 1887. H. M. Hadley, Topeka, secretary.

ASSOCIATION OF OHIO ARCHITECTS meets semi-annually. Next meeting Thursday, July 15, 1886. O. C. Smith, Cincinnati, secretary.

ASSOCIATION OF TEXAS ARCHITECTS meets at Austin on the third Tuesday of January, 1887. S. A. J. Preston, Austin, secretary.

The CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday, Builders and Traders' Exchange. W. G. Williamson, secretary.

The WESTERN SOCIETY OF ENGINEERS meets the first and third Tuesdays of each month at 4 o'clock P.M., at 15 East Washington street, Chicago.

The MASTER PLUMBERS' SOCIETY, of Chicago, meets first and third Wednesdays of the month, 7:30 P.M., at 15 East Washington street.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting of the sketch club of February 15, was called to order at 8:30 P.M., President Harry Lawrie in the chair. Pursuant to instructions, Treasurer C. A. Kessell read the names of the members who had not paid their dues for 1885. During the discussion which followed, the treasurer explained that these delinquents had been notified repeatedly of the penalty should they not pay up before this meeting. The advisability of dropping the names of all who had not paid all dues for 1885 was discussed, but no definite action was taken, the whole matter being laid on the table for future consideration. Sketches were presented in competition, the subject being the second of the series, an "Eight Room Stone House." The result was, "Rough," W. G. Williamson, first prize; "Rats," Irving K. Pond, second prize; and "Nevermind," O. R. Enders, third prize. The choice was shown by the ballots to be a close one.

The paper of the evening was entitled "Stonework," and was read by Mr. J. F. Hetherington. It proved an exhaustive treatise of the subject, and was well illustrated on the blackboard. At the conclusion of the paper Mr. Hetherington was given a hearty round of applause and a vote of thanks for the excellent treat he had given the club.

The balance of the evening was devoted to the discussion of the paper in which President Lawrie illustrated the present condition of the stonework of the county court house, several of the members expressing their idea of the cause, remedy, etc. Mr. Beaumont spoke briefly of some of his European experiences, illustrating the more important points upon the blackboard.

Among the visitors were seen T. L. Johnson, of James W. Queen & Co., Philadelphia, and E. O. Blake, of the Chicago Anderson Pressed Brick Co. The latter was made an honorary member at a recent meeting. After adjournment both gentlemen expressed themselves as having been highly entertained, and much pleased to note the remarkable success of the club.

The meeting, March 1, was entirely devoted to sketching, the subject being a balcony, the rendering of which developed many new and admirable forms. The general expression of members after an evening sketching is that it is a benefit as well as a pleasurable evening work.

The next meeting, March 15, will be an evening with I. K. Pond. The subject of his paper is "Polychromatic Ornaments," and will no doubt be received by a large audience.

PLASTERERS' UNION.

At a largely attended meeting of the Plasterers' Union, held on the 4th instant, at No. 36 La Salle street, for the purpose of fixing upon the number of hours that should constitute a day's work, and the pay per diem of a union plasterer for the season of 1886, the union decided to allow its members to work for not less than \$3.50 per day, and that the labor of eight hours should be called a day's work. This decision was unanimous.

CHICAGO BUILDERS AND TRADERS.

The adjourned meeting of the exchange to consider the amendment to the state lien law, was held February 26, President Geo. C. Prussing in the chair. The secretary read the minutes of the previous meeting, and referred to the full report of the exchange's attorney's remarks at the previous meeting in the Intermediate News Number of THE INLAND ARCHITECT AND BUILDER, which was in the hands of the members. There was an unusually large attendance, and the expression in regard to the motion which was offered at the previous meeting, was general. The speaking was led by W. S. Ellis, an attorney, and the general impression given by that gentleman's opinion, and the practical experience of members, was that the present lien law of Illinois was a protection to the contractor only; and to the sub-contractor and the material dealer it was worthless. The law formed by the old Mechanics' Institute, in force from 1863 to 1868, was spoken of as a model.



The resolution as read previous to voting, was as follows :

Resolved, That the chairman appoint a committee of five to secure the coöperation of kindred societies and interested parties throughout the state in securing the passage of a simple and effective lien law, which shall secure the payment, so far as possible, of all labor and material furnished, and that the committee be instructed to consult the attorney of the exchange in drawing up such an adequate law, to be presented to a future meeting of exchange.

The resolution was finally carried by a three-fourths vote, and Messrs. A. B. Cook, Wm. E. Hinchcliff, Wm. E. Frost, A. Kroeshell and A. E. Elmers appointed as the committee to report at a future meeting.

A vote of thanks was extended to E. E. Prussing and W. S. Ellis, and the meeting adjourned.

ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS.

In response to a call issued by Professor I. O. Baker, of the Illinois University, a number of the engineers and surveyors of the state met at Champaign, Ill., on February 10, the meeting lasting three days.

The first meeting was called to order by Professor Baker. C. G. Elliott, of Tonica, G. F. Whiteman, of Peoria, and T. L. Johnson, of Philadelphia, Pa., were appointed a committee on permanent organization, and reported the following officers of the meeting: President, Professor I. O. Baker; Vice-President, D. J. Stanford, of Chatsworth; Secretary, A. H. Bell, of Bloomington.

After the adoption and signing of the constitution by thirty-five charter members the following officers were elected to serve one year: President, Professor I. O. Baker, of Champaign; Vice-President, Daniel Gordon, of Moline; Recording Secretary, Professor A. N. Talbot, of Champaign; Corresponding Secretary, S. A. Bullard, of Springfield; Treasurer, Geo. B. Ela, of Bloomington; Executive Committee, C. G. Elliott, of Tonica; A. H. Bell, of Bloomington; L. D. Braucher, of Lincoln. The balance of the time was devoted to the reading of the following papers: "Drainage Districts and the Construction of Drainage Canals," A. H. Bell. "The Highest Attainment in Drainage," E. D. Shreve, of Bucyrus, Ohio. "Construction and Preservation of Reservoirs," Daniel Gordon. "Municipal Engineering," A. H. Bell. "Road Improvement," C. G. Elliott. "Pile Foundations," F. J. Sager, of Marysville, Ohio. "Topographical Surveying," C. W. Clark, of Champaign. "Bridges," L. D. Braucher. "Surveying," T. B. Kyle, of Champaign. "Legal Points in Sub-Division of Land," Warren Roberts, of Sandorus. "Sub-Division of Fractional Quarter Sections," Z. A. Enos, of Springfield. "Sewers for Small Cities," S. A. Bullard. "Drainage," John R. Lewis, of Piper City.

A vote of thanks was tendered Mr. T. L. Johnson, of James W. Queen & Co., Philadelphia, Pa., for assistance in the formation of the society, also for placing upon exhibition in the hall a large and elegant display of engineer's and surveyor's instruments.

The society ratified the action of the Cleveland convention, and appointed a committee to meet with them.

THE CHICAGO ART INSTITUTE.

The programme for the winter term, which opened Monday, January 4, has been issued. The regular classes are: Costumed Life, under A. J. Rupert and C. A. Corwin; Still Life, under C. A. Corwin; Nude Life, under A. J. Rupert; Antique, under J. L. Wallace and Miss C. D. Wade; Composition, under C. A. Corwin; Modelling, under J. L. Wallace; Perspective, under N. H. Carpenter; Time and Memory Sketching, under W. M. R. French; Ornamental Designing (evening), under L. J. Millet; Evening Life and Antique Classes, under J. L. Wallace and A. F. Kleiminger; Saturday Antique and Object Classes, under Miss Wade, Miss Hay and Miss Smalley.

Tuition fees are \$25 for the term of twelve weeks; evening school, \$10 for life and designing classes; \$6 for antique. Special rates for shorter terms.

The following changes in classes have been made:

The Modeling Class will meet two forenoons besides Saturdays. A class in Sketching from Memory will be formed of students of the Antique. Especial attention is called to the value of the evening designing class.

There will be a series of informal lectures on subjects connected with art practice, open to all students and their friends, probably in the antique room every Tuesday, at 4 P.M., by gentlemen interested in specialties, such as: Mr. Jos. L. Silsbee, on Color in Architecture; Mr. F. W. Gookin, on Pattern Designing; Dr. E. J. Gardiner, on Color Perception; Mr. Jos. M. Rogers, on Old Engravings; Rev. J. Colman Adams, on Artistic Expression; Mr. W. L. B. Jenney, on Elements of Architecture; Dr. R. U. Piper, on Etching and Engraving, etc.

The changes in the school rooms, incident to building, are completed for the year. The management takes this opportunity to thank the students for their patience under the interruptions of the last term.

The new antique and life rooms are as well lighted and arranged as any in the country.

A variety of improvements have been made during the vacation, and especial measures have been taken to heat the rooms thoroughly.

A class in Decorative Design has been formed under the direction of Louis J. Millet, comprising a course of instruction in practice in freehand drawing, from the flat and from ornamental casts; conventionalizing of natural forms; combination of such conventionalized forms into designs for particular purposes; practice in water-color; instruction in the sources of design and the use of reference books; suggestions from historical ornament; classification of styles, etc.

It is not too much to say that there has never been a teacher in Chicago in this special branch whose qualifications approached those of Mr. Millet. His education in the government schools of Paris, namely, the School of Decorative Arts and the School of Fine Arts, of which he is a graduate, have given him a complete training in the subject he deals with. Mr. Millet belongs to the firm of Healy & Millet, interior decorators, and his constant practice in the application of ornamentation to the different branches of his art, makes him particularly valuable as a practical instructor to those whose aim is to fill positions as draughtsmen.

The class meets Monday, Wednesday and Friday evenings, 7:30 to 9:30, beginning Monday, January 4, 1886. Students will be received at any time. The tuition fee is \$10 for the term of twelve weeks, in advance.

Students in the antique and life classes are invited to consider entering this class. Study in the different classes should be reciprocal as much as possible. Ladies, whose inclination leads them to practice decorative designing, either professionally, or as a matter of taste, will have every opportunity offered them, and all persons who are interested are invited to visit the class and meet the instructor. W. M. R. French is director, and N. H. Carpenter secretary.

BRITISH ASSOCIATION OF ARCHITECTS.

The next meeting of the British Association is to be held at Birmingham, beginning on Wednesday, September 1. It will derive more than usual interest and importance from the exhibition of local manufactures which is to be held in connection with it. The association has met three times previously in Birmingham—in 1838, 1849 and 1865. On each occasion an exhibition of local manufactures was held, and it is an interesting fact to record that to the example of the first of these are due all international and other exhibitions since conducted on so large a scale. The exhibition of 1838 was the first industrial exhibition in the country. The Prince Consort visited the one in 1849, and it suggested to him the idea of the International Exhibition of 1851. The exhibition which is to be held on the forthcoming occasion will be on a very much larger scale and of a much more popular and attractive character than has ever been attempted before. It is to be an exhibition illustrative of products and processes connected with the manufacturing industries of Birmingham and the surrounding districts within a radius of fifteen miles. The exhibition will be on a very complete scale, and will embrace engineering, hardware, heating and lighting, arms and ammunition, jewelry, glass and pottery, stationery, leather, furniture and decoration, and a miscellaneous class, including scientific and musical instruments.

ILLINOIS STATE ASSOCIATION.

At the meeting of March 4, the subject of the sanitation of buildings was discussed. The gentlemen invited, who are leading authorities on the subject in the West, were Dr. Oscar De Wolf, the city health commissioner, W. H. Genung, chief sanitary inspector, and Dr. J. E. Gilman, who discussed the subject at length. The full proceedings of this meeting will be given in the Intermediate News Edition of this month. The subject for the next meeting will be found in the following extract from the proceedings:

President Burnham: It seems to me this discussion is of great importance, and as these gentlemen, Messrs. De Wolf, Gilman and Genung, are to be with us again, it would be a good idea to get the points for any action we may be able to bring to bear, as soon as possible (if it is thought best to devote the next meeting to this subject), in suggestions for a statutory enactment. I would like to have some gentleman make the motion.

Mr. Sullivan: I move that at our next meeting Commissioner De Wolf, Mr. Genung and Dr. Gilman be invited to meet us, and at that meeting the commissioner of health will present a draft for the revision of the law covering sanitation of buildings, and that the matter be then thoroughly discussed.

Mr. Bauman: As an amendment to that motion, I move that three of our principal plumbers be also invited to attend this discussion.

The President: I hope every member will devote as much spare time to thought on this subject as possible during the next month. It is of very great importance. These gentlemen have put it in our power to assist them to initiate the proper action, and if we each of us come prepared to say something, it will supplement all that has been done. I do not doubt but every word each gentleman will have to say will help somewhat. I hope that each will think the subject over carefully and get his mind into a good, sharp, crisp condition.

The motion was carried.

Mr. Sullivan: I move that a vote of thanks be tendered to these gentlemen (Messrs. De Wolf, Gilman and Genung.) Carried.

Mr. Randolph: I ask leave to invite Mr. Bailey, of the Ruttan Manufacturing Company, to attend our next meeting.

The President: There will be no objection.

The meeting adjourned.

Correspondence.

Editors Inland Architect: DES MOINES, Iowa, Feb. 13, 1886.

In your report of the proceedings of the last convention of Iowa architects, held at Des Moines, published in the Intermediate Number for January, 1886, you accredit me with offering the resolution near the bottom of page 128, made in relation to the "Code" for Competition. This is an error. The resolution and preamble were presented by W. F. Hackney, who also moved their adoption. I moved to amend by striking out the third resolution, but was voted down. Please make this correction, and oblige,

Yours truly,

C. H. LEE.

New Publications.

In the review of "A Guide to Sanitary House Inspection," by Wm. Paul Gerhard, of New York, published last month, the price quoted, \$4.25, was incorrect. The price of this admirably written and practical work is \$1.25. The other figures should stand for what the book is really worth.

THE HEATING AND VENTILATION OF PUBLIC BUILDINGS: An Essay on the Heating and Ventilation of Public Buildings, with special reference to the Senate and House of Representatives of the United States. By J. L. SMITHMEYER, architect, F. A. I. A. Published by the author.

This pamphlet of 48 pages is briefly an argument in favor of what is called the "down-draught" system of heating and ventilating the halls of congress at Washington. Mr. J. L. Smithmeyer, its author, is an architect

in Washington, who has given much attention to this particular subject, having been one of a committee of experts appointed by congress in 1880 to report upon the improvement of light and air in the senate chamber and house of representatives.

Scientific authorities have long been divided on the question of up-draught and down-draught, pulsion or exhaust, heating and ventilating. Those who wish to examine the arguments in favor of the latter, which is the less usual mode, can hardly find them more clearly, forcibly and persuasively set forth than in this essay of Mr. Smithmeyer's, and he brings to his support numerous quotations from the opinions of eminent scientists at home and abroad, although some of them, dating back thirty years or more, lose by age something of their force in the discussion of a problem, many of whose features have materially changed in that period.

THE INTERNATIONAL RECORD OF CHARITIES AND CORRECTION. New York and London.

G. P. Putnam's Sons will begin in March the publication of a monthly journal, to be entitled *The International Record of Charities and Correction*. The *Record* will be issued in quarto form, and each number will contain sixteen pages of original and selected matter, exclusive of advertisements, printed in the best style, on book paper, suitable for binding. It will be devoted to the discussion of all questions relating to the care and treatment of the unfortunate and criminal classes, in all their varied aspects—humanitarian, economic, scientific, governmental, and practical, containing the latest accessible information, from all parts of the world, as to the steps taken for the amelioration of suffering, and the prevention of pauperism and crime, and of their consequent evils. This journal will be found of service, not only to officers and managers of public and private charitable and reformatory institutions and associations, but to all who are interested, for any reason, in the elevation of the condition of mankind. The editorial control will be in the hands of Mr. Fred. Howard Wines, for sixteen years the secretary of the Illinois board of state commissioners of public charities, and late special agent of the tenth census. The *Record* will be issued monthly, at the annual subscription price of \$1, and the price per number will be ten cents. Specimen numbers sent on receipt of five cents. G. P. Putnam's Sons, publishers. London office, 27 King William street, Strand. New York office, 27 and 29 West Twenty-third street.

EXTERIOR DECORATION: A treatise on the artistic use of colors in the ornamentation of buildings, and a series of designs illustrating the effect of different combinations of colors in connection with various styles of architecture. Published by F. W. Devoe & Company, New York; Coffin, Devoe & Company, Chicago, 1885.

Among the recent publications we are pleased to notice that of F. W. Devoe & Co., New York, on "Exterior Decoration." It is a concise treatise on the exterior painting and decoration of the modern dwelling, and a practical illustration of what this firm produces in the way of prepared paints. The correct employment or arrangement of colors to produce the most harmonious decorative effects seem to have been successfully accomplished in this work. The articles on "Art in House Painting," "The Artistic Selection and Combination of Colors," "A Chapter on Paints," and "Practical Suggestions to the Painter," are interesting to the architect, the builder, or to those who contemplate building. The book is 12 by 15, elegantly bound, and contains twenty practical illustrations, in the form of plates, of different styles of architecture, showing a tasteful employment of paints, also the effect produced by a contrast of colors under different conditions as to landscape, architecture, etc. The various shades are also shown in its pages, and from which may be selected the colors necessary to produce a rich, harmonious effect, according to the surroundings. It is by far the most extensive publication in this line ever issued, and will be found an aid to those who seek to study modern taste in the selection and application of decorating materials. Coffin, Devoe & Co., Chicago, are the general wholesale western agents of F. W. Devoe & Co., and can furnish this book upon application, by mail or otherwise, at a very moderate price.

ELEMENTARY GRAPHIC STATICS, AND THE CONSTRUCTION OF TRUSSED ROOFS: A Manual of Theory and Practice, by N. CLIFFORD RICKER, M. Arch., Professor of Architecture, University of Illinois; Fellow of American Institute of Architects, and of the Western Association of Architects. New York: William T. Comstock, 6 Astor Place, 1885. \$2.00. Sent by mail, free of postage, to any part of the world.

Graphic statics is the science of determining the strains in bridges, roof trusses and other structures by graphic methods, in place of the laborious numerical computations which have hitherto been employed. Its development, and successful application to practical questions, for which the world is indebted chiefly to Professors Culmann, of Zurich, Switzerland, and Clerk Maxwell, of England, is one of the most noteworthy contributions of the nineteenth century to applied science. The graphic methods are wonderfully comprehensive, accurate and rapid, easy of application, and they have the great advantage over numerical calculations of containing within themselves a system of checks which guard against errors in the process of solution. Prof. Ricker's book is an expansion of a series of articles on the construction of roofs, formerly contributed by him to "Building." In its present form it gives essentially the course of study on this subject at the Illinois State University, where its author is professor of architecture.

Beside the general principles of graphic statics, it particularly treats of roof construction from an architect's standpoint, and gives various tables and data of the weights of roof trusses, roofing materials, snow, etc.; also methods of computing the lengths of truss members, and of proportioning their dimensions to practical requirements. There are, beside, the usual formula for tensile, compressive and transverse strains, and useful suggestions about the construction of joints, etc. Beside the graphic solutions, it gives a good explanation of Ritter's method of moments, which is partly graphic, partly numerical, and a very useful expedient in many cases. There is a good index at the close. The book is well illustrated, and is calculated to be very serviceable, both to students and architects, from the amount of useful matter it contains. We regret to note a good many typographical errors, which, it is to be hoped, may be corrected in a later edition.

Mosaics.

ARCHITECT A. BAUER, of Bauer & Hill, will return from his European tour about May 1.

J. M. MARSTON & Co., of Boston, report a large reduction in price in hand and foot power machinery, dating from February 1.

THE Peerless Brick Company, of Philadelphia, have just issued a circular, illustrating a number of new styles of ornamental pressed brick.

THERE have been received from Architect Nath'l Tobey, Galveston, Texas, plans and elevations of a proposed residence, which show some excellent architectural features.

ARCHITECT H. R. WILSON, of 79 Dearborn street, will move his office on March 1, 1886, to the new Insurance Exchange Building, corner of La Salle and Adams streets, occupying suites 910, 911 and 912, his business having outgrown his present quarters.

A FACTORY chimney, 8 feet square at the base and 100 feet high, weighing 170 tons, was recently standing at a certain point in Bridgeport, Connecticut. It is now standing 45 feet away from that spot, having been moved bodily and placed on a new foundation.

B. D. STEVENS, the inventor of a sliding inside blind, of considerable merit, is in Chicago, looking for a location to manufacture. The blind has been strongly indorsed by Eastern architects, and should be seen by architects in search of a reliable inside blind for moderate cost houses.

C. J. WARREN, lately a leading draughtsman in the office of Burnham & Root, has established himself in business in the National Bank of Illinois building. Eugene A. Calkin, formerly with Wheelock & Clay, is also in this building. A new firm, composed of A. W. Cole and R. W. Dahlgren, formerly with L. G. Hallberg, is located in the Ashland block.

THE press dispatches recently stated that the boiler house of the Indiana Southern Hospital, for the Insane at Evansville, had collapsed at a cost of \$18,000 to the state. The boiler house is being built upon quick sand, and some fears have been entertained for its safety, but word has been received from the architect stating that the building still stands in good condition.

MR. GEO. JOSSELYN, who has for a number of years superintended the construction of the Iowa Hospital for Insane at Independence, has removed to Cedar Rapids, Iowa. He will there act in connection with Josselyn & Taylor, architects, as an advisory and superintending architect, for which his many years practical experience eminently fit him. The firm will still be composed of Harry S. Josselyn & Eugene H. Taylor with offices at Des Moines and Cedar Rapids.

THE Chicago Anderson Pressed Brick Company have offered a premium of fifty dollars to the Chicago Architectural Sketch Club for designs for brick mantels. This amount will be divided into three prizes of \$25, \$15 and \$10, for the three best designs for a hall mantel, eleven foot ceiling made from brick in the firms catalogue, with no terra-cotta, the designs to be adjudicated by three prominent architects, the money to go to the successful draftsman and the design to become the property of the pressed brick company.

THE general principles of a lock found among the ruins of the great temple of Karnak, and which was in use more than forty centuries ago, is said to have served as the foundation for most of the inventions of recent times. The locksmiths of China, we are told, had, centuries before the birth of Christ, perfected a lock out of which a sharp bamboo thorn would dart and strike the hand of any one wrongfully tampering with it. The end of this bamboo thorn was steeped in a poisonous decoction, and, should the luckless thief escape death, he would be maimed for life.

"THE STORY OF THE MURPHY VARNISHES" is the appropriate and expressive title of a neat little *brochure* just published by Murphy & Co., varnish makers of New York. It is artistically gotten up, the cover being stamped bronze of antique design, representing a Roman chariot, embossed with the initials of the firm. The work is handsomely illustrated, portraying the various stages of the manufacture of their varnishes and the works in Newark, N. J., and Cleveland, Ohio. It also illustrates the different offices of the company in New York, St. Louis and Chicago.

THE HENRY DIBBLEE COMPANY is now the name of the former Henry Dibblee & Co. The company is composed of Henry Dibblee, president; Anson S. Hopkins, vice-president and general manager, and E. D. Redington, secretary and treasurer. The new company increases materially the strength and enterprise of the old, and their friends will be glad to know that they are arranging to improve upon what has seemed already perfect, their variety and assortment of fine mantels, fireplaces and tile work. This will include a radical change and improvement of the show-rooms, as the entire floor will be devoted to this purpose and handsomely appointed.

ARCHITECTS generally are specifying the quality of tin to be used in roofs constructed under their supervision, but it is not uncommon that plates of an inferior grade than that specified are used entirely or mixed with those specified made by manufacturers known to be thoroughly reliable. Wishing to perform their full duty to their clients they must either become experts in tinplate manufacture or they must specify plates made by those upon whom they can rely and who brand and guarantee every plate, so that the roof itself is a standing warantee of its own stability. This stamping is now done by the most reputable of the manufacturers, so that each plate indicates the brand used beyond any chance of fraud or mistake.

RUMORS in regard to changes in the works of the Union Foundry and Pullman Car-wheel Works have been floating in building circles, the alleged change being a separation of the architectural iron department and its removal to a separate location, etc. On investigation these allegations are found to be perfectly groundless, the only change being in a recent transfer of stock, but in no way effecting the building public who are interested in the prompt filling of their contracts for iron work. Thus, their large plant, gives ample facilities for, and, in the language of a

prominent officer of the company, "the Union Foundry's flag still waves," the only change being that of progression, which is always taking place in the supplying of new forms of architectural iron work in response to the demand of the architect.

THE best asphalt for floors is now brought from Seyssel and Val de Travers, and is generally used for floors in public buildings, maltheuses, etc., and all the minor places where a hard, smooth and permanent floor is required, and has been widely used for years in Europe. This rock asphalt is found in natural deposits. It contains no coal tar or artificial products, and within a few hours after laying is set and ready for service, making one of the most durable of floors and is invaluable for fireproof buildings. This also is true in regard to its use in dwelling-house cellars, in moist ground, as it is water tight and non-absorbent. It is impervious to sewer gas and as it is odorless can be laid over cement, concrete, brick or wood, and in one sheet from a sanitary standpoint is incomparable. The merits of this material is indorsed by no less an authority than Gen. Q. A. Gilmore, copied from "Johnson's Cyclopaedia," as follows: "It must be conceded that nothing has yet been discovered which can replace with entire satisfaction the bituminous limestones of Seyssel and Val de Travers. In the natural asphaltic rock the calcareous matter is so intimately and impalpably combined with the bitumen, resists so thoroughly the action of air and water and even muriatic acid, is so entirely free from moisture, properties due perhaps to the vast pressure and intense heat under which the ingredients have been incorporated by nature, that we are forced to attribute the excellence of this material to the existence of certain natural conditions which the most skillful artificial methods fail to reproduce." This asphalt is imported by Messrs. Simpson Bros., of New York and Chicago, who have laid floors of this material throughout the country, and have in their employ foreign experts of large experience, thus insuring a product of exceptional quality. The members of the firm are G. F. & James Simpson.

ENCASED in every human frame is a wonderful machine, or force pump, which drives the blood through the arteries to all parts of the body, from whence it is returned to the machine through the veins. This machine is the heart, and, together with the arteries, veins and capillaries, constitutes the medium through which circulation is maintained in the system. This wonderful human arrangement is of no more vital importance to man than are the railroads to the prosperity of the country—they are the circulating mediums of the nation's progress. Of them, owing to its geographical position, great length of lines, the large number of important cities it reaches, and the productive territory which it traverses, the Burlington route, C. B. & Q. R. R., may, in comparison with the physiological structure mentioned, be called the "Iron Heart." Like its prototype in the flesh, it receives and emits a ceaseless flow of material for the maintenance of vitality. To and from Chicago, Peoria, or St. Louis on the east, and Council Bluffs, Omaha, St. Joseph, Atchison, Kansas City and Denver on the west, it circulates all classes of travel between the prominent cities of the East, and intermediate points, on the one hand, and the City of Mexico, Portland, San Francisco and all Pacific Coast points on the other. From many of its numerous terminals it is also a strong factor in the maintenance of travel between prominent points north and south, thus literally maintaining a circulation of commerce in all directions. Unlike many human hearts, the condition of this one of iron is always strong and healthy, as the Burlington route maintains elegant equipment, perfect roadbeds, steel tracks, and, at important points, interlocking switches, besides adopting every modern device that will add to the comfort or safety of its patrons. For tickets, rates, or general information regarding the Burlington route, call on any railroad ticket agent in the United States or Canada, or address Perceval Lowell, general passenger agent, C. B. & Q. R. R., Chicago, Ill.

Inventive Genius in Building.

Reported especially for THE INLAND ARCHITECT AND BUILDER, by Franklin H. Hough, solicitor of patents, 925 F street, N.-W., Washington, D. C.)

- 333,565. Blind, Shutter or Screen. B. D. Stevens, Burlington, Vt.
- 333,568. Door Spring and Check. J. S. Stevens and C. G. Major, Battersea, England.
- 333,820. Heating Device for Rooms. W. H. Bowman, Boston, Mass.
- 333,902. Houses, Construction of. E. Totman, Hinsdale, Ill.
- 333,603. Roofing-ridge and Valley. L. D. Courtright, Chicago, Ill.
- 333,654. Sash and Frame, Window. W. E. Michael, Reading, Pa.
- 333,775. Sash-cord Fastener. A. Oberndorfer, Norfolk, Va.
- 334,401. Building Material, Form of. J. S. Armstrong, New Brunswick, Ca.
- 334,203. Door-attachment, Sliding. W. Spear, Aurora, Ill.
- 334,344. Door-hanger. C. W. Bullard, Chicago, Ill.
- 334,160. Eaves-trough. W. C. Berger, Canton, Ohio.
- 334,088. Fire-place. E. R. Procter, Washington Court House, Ohio.
- 334,694. Buildings, Construction of. T. DeLemos and A. W. Cordes, New York.
- 334,636. Door-securer. D. Bromley, Carrollton, Ky.
- 334,611. Flooring and Ceiling Clamp. E. A. Reed, Olive Springs, Tenn.
- 334,603. Lathing. C. E. Merrifield, Indianapolis, Ind.
- 334,524. Roofing, Metal. F. C. Tegethoff, Cleveland, Ohio.
- 334,463. Weather-strip. C. J. W. Platt, Philadelphia, Pa.
- 334,093. Blind-slat Adjuster. P. Rundquist, New York, N. Y.
- 334,763. Building and System for Laying Electric Conductors therein. C. N. Fay, Chicago, Ill.
- 334,772. Building-bracket. A. D. Hart, Elmira, N. Y.
- 334,996. Ceilings, Manufacturing Flanged. S. Sullivan, Upper Newton Falls, Mass.
- 334,975. Ceiling, Fireproof. C. Toope, London, Eng.
- 334,834. Door-closer. D. T. Winter, Peabody, Mass.
- 334,831. Eaves-trough Support. W. R. Wilcox, Nashua, N. H.
- 335,008. Weather-strip. A. F. Van Dolsen, Dennison, Mo.
- 335,362. Chimney-Cap and Ventilator. W. J. & C. Kayser, Chicago, Ill.
- 335,047. Buildings, Fireproof. R. Gustavino, New York, N. Y.
- 335,575. Door Check, Pneumatic. G. Geer, Peterborough, N. H.
- 335,835. House, Summer or Bath. F. I. Palmer, New York, N. Y.
- 335,820. House Ventilation. W. Moore & J. B. Carter, Kokomo, Ind.
- 335,930. Weather Strip. T. Law, Manhattan, Kan.
- 336,465. Building Wall. W. P. Andrews, Dana, Ind.
- 336,309. Door Spring. D. W. Frost, Keokuk, Iowa.
- 336,375. Latch, Door. T. C. H. Bayrhofer, Rising City, Neb.
- 336,517. Lathing. H. H. Fulton, Indianapolis, Ind.
- 336,098. Roofing, Metal. J. H. Miller, Canton, Ohio.
- 336,864. Bell, Door. W. A. Milligan, Wheeling, W. Va.
- 10,692. Blind, Window. A. H. Hill, Oskaloosa, Iowa.
- 336,707. Chimney-Cap. T. Edwards, Amherst, Nova Scotia, Canada.
- 336,638. Latch, Sliding Door. J. T. Gordon & J. H. Hamilton, Concord, N. H.

PUBLISHERS' DEPARTMENT.

Elevators in Minnesota.

THE Commercial Bank office building of Duluth, Minnesota, which is illustrated in this number, is a forerunner of several large office buildings to be erected in the West and Northwest. The owners, taking advantage of the experience acquired in office building by Architect W. L. B. Jenney, of Chicago, have adopted his plans for the construction of the building. The contracts that have been awarded show that the work is intended to be first-class, and that the latest improvements have been selected. One of the most important adjuncts to office building is the elevator system, without which the higher stories would be comparatively useless; in fact, it is only by their use that the owners of high office buildings can advantageously rent their upper floors. The selection of the elevators for the "Commercial" is another instance of the popularity enjoyed by the Hale elevators; their reputation for speed, safety and smooth running qualities has long made them famous in all our large cities, and it is with pride that the Chicago citizen calls the visitors' attention to the Home Insurance office building, where this system of elevators is fully demonstrated. It is safe to say that the majority of the new large buildings lately constructed in Chicago are furnished with this elevator, and it certainly must be a source of gratification to the firm that the merits of their elevators are so well appreciated in the West and Northwest that when any new structure requiring elevator service is projected, it can safely be surmised that the Hale & Co.'s will be selected.

Synopsis of Building News.

Alma, Mich.—Architect F. W. Hollister of Saginaw, Mich., reports: For Alma Union School, two-story, ten-room, brick and stone building, 96 by 94 feet, slate roof; cost \$20,000; under way; Chas. Tiedke and Wm. H. Smith, builders. For Central Michigan Normal School, three-story, brick-veneer college building, 100 by 71 feet; cost \$25,000; and three-story, brick veneer dormitory building, 34 by 96 feet, slate roof; cost \$15,000; contracts being let.

Akron, Ohio.—Architects Weary & Kramer report the following as the principal work of their firm during 1885: Stone court house for Carroll county, Ohio; cost \$100,000; not yet completed. Stone court house for Hancock county, Ohio; cost \$140,000; just commenced. Brick jail and sheriff's residence for Ashland county, Ohio; just commenced; cost \$26,000. Stone recitation hall and observatory at Oberlin, Ohio; not completed; cost \$75,000. Brick jail and sheriff's residence for Carroll county; cost \$15,000; completed. Pressed brick high school building at Canton, Ohio; cost \$100,000; under way. Hotel Hartford, brick, at Canton, Ohio, rebuilding of old St. Cloud; cost \$35,000. Pressed brick and stone business block for Hon. G. W. Course, at Akron; cost \$45,000. Brick business building for John Rampanelli at Akron; cost \$10,000. Brick business building for W. G. Haltman at Ashland, Ohio; cost \$8,000. Brick M. E. church at Doylestown, Ohio; cost \$12,000. Frame Presbyterian church at Rittman, Ohio; cost \$8,000. Columbia rink, frame, for Howland Bros., at Akron; cost \$16,000. Frame summer hotel, pavilion, etc., at Chippewa Lake, Ohio; cost \$12,000. Brick factory building for Akron Twine and Cordage Co.; cost \$20,000. Also seven frame dwellings for different parties; cost from \$2,000 to \$7,000 each. Barn and offices for Brewster Coal Co., at Akron; cost \$10,000. Observatory for Buchtel College, Akron. Business buildings for S. A. Curand, at Massillon, and C. W. Werner, at Canton, Ohio. Besides a number of smaller jobs. Prospects for the coming year, while not brilliant are not discouraging.

Battle Creek, Mich.—Building has been very dull through the past winter; but the outlook for coming season is better than usual.

Architect J. H. Hawkins reports several jobs, the most important of which is a two-story frame dwelling, 46 by 64 feet, for Hon. V. P. Collier; cost \$4,000; under way; George Carl, builder.

Blue Earth City, Minn.—Architects C. G. Maybury & Son, of Winona, Minn., report: For W. E. C. Ross, two-story frame dwelling, 32 by 44 feet; cost \$20,000; projected.

Buffalo, N. Y.—Architect R. A. Waite reports: For Sherman S. Jewett & Co. five-story brick stove emporium, with iron front, to cost \$125,000; the contractor for the mason-work is Charles Berrick, and for the ironwork, H. C. Harrower; the carpenter-work, roofing, etc., will be done by the day.

Architect George J. Metzger reports: For John Wickser, two-story frame residence, to cost \$4,500; Stephen Reimann, contractor. For T. K. Kraft, two-story frame residence, to cost \$5,000; Stephen Reimann, contractor. For Misses Burtiss, two-story frame residence, to cost \$5,000; Stephen Reimann, contractor. For Louis Goetz, alterations in store on Pearl, near Eagle street, to cost \$6,000; Stephen Reimann, contractor. Ground has been broken for a five-story brick building to be erected on Seneca street, it will be 80 by 200 feet; when finished it will be occupied as a storage warehouse and as stables for the Buffalo Carting Company and the Buffalo Stage Company.

Architect F. W. Caulkins reports: For Louis Bergtold, brick stores and flats, to cost \$5,000; John L. Frank, contractor.

Architect F. W. Humble reports: For the Glenn estate, alterations in stores, 204 and 206 Main street, to cost \$15,000; Henry Schaefer, contractor.

George Atkinson reports: For George B. Hayes, iron foundry, to cost \$10,000, at East Buffalo. For Oscar Meyer, two-story frame residence, to cost \$4,000, on Hodge avenue.

Builder Stephen Reimann reports that he is building two frame houses on Garden street for William Brewster, to cost \$4,500 each. Frame residence for William Watson to cost \$2,500; also one frame house for Joseph Becker, to cost \$2,500.

Architect Louis Saenger reports: For Michael Bankritz, frame store, to cost \$4,500; Stephen Reimann, contractor.

Cedar Rapids, Iowa.—Architects Joselyn & Taylor report: For John Thomas, residence, 48 by 56 feet; cost \$10,000; no contracts let.

Chattanooga, Tenn.—There is at present a large amount of work on hand which cannot be done on account of the weather. Prospects for spring season are very good, and it is thought the buildings erected this year will be of a much better class than previously.

Architect A. Delisle reports: For C. P. Robertson, two-story frame dwelling, 52 by 60 feet, handsomely finished, Welter's patent shingle roof; cost \$4,000; under way; H. C. Jackson, builder. For M. C. Chambers, two-story brick store and dwelling, 25 by 70 feet, stone trimmings; cost \$3,800; under way; H. C. Jackson, builder. For H. R. Banks, two-story frame dwelling, 30 by 60 feet; cost about \$3,000; projected. For Fred Isbert, two-story frame dwelling, 16 by 25 feet; cost about \$2,000; projected. For C. B. Isbert, two-story frame dwelling; cost \$800.

Chicago.—The spring building has not yet commenced, except on the boards in the architects' offices, but here the past month has been full of activity. The demand for suburban work is great, one real estate firm contemplating the erection of one hundred houses in a near suburb the coming season.

Rents will not probably advance, and there is even a tendency toward reduction. Flats have become unpopular, and will probably be rented at a reduced figure. This will probably hold true except in localities where there is competition among tenants. The foundations of the "Central" (on the old rookery lot) are progressing. They cover an area of 177 feet 8 inches on La Salle street, and 168 feet 6 inches on Adams street. The foundation of the Phoenix Insurance building has been completed, and the covering removed, showing some superbly built brick piers.

Architect J. J. Egan reports: Plans for two three-story and basement dwellings for John O'Connell, on La Salle avenue, brick, brownstone and terra-cotta; and for the Misses O'Brien, a dwelling on Calumet avenue, near Thirty-first street, to cost \$7,000.

An addition to St. John's Hospital, at Springfield, Ill., three stories, 60 by 100 feet, including chapel, brick and stone, steam heat, stained glass, to cost \$20,000. For Rev. Father Tierney, a brick and stone church, at Henderson, Ky., for 650 sittings, to cost \$25,000.

Architects Rae & Wheelock report: For Rev. P. S. Henson, at 3249 South Park avenue, a two-story, cellar and attic residence, of pressed brick, stone, terra-cotta and red slate, hardwood finish, steam heat, 27 by 70 feet; cost \$15,000, including brick stable. For H. F. Googins, at 3,247 South Park avenue, a two-story, cellar and attic residence; cost \$7,500. For F. J. Shea, at South Chicago, a block of four flats; cost \$12,000. For T. W. Cole, on Calumet avenue near Thirty-third street, a two-story and cellar residence, front of Kasota pink colored stone, hardwood finish, 17 by 68 feet; cost \$6,000. For C. W. Foster, at Roger's Park, a frame residence, 30 by 57 feet; cost \$4,000. For A. Gordon Jones, a two-story and cellar residence, front of Kasota pink-colored stone, hardwood finish, 17 by 68 feet; cost \$6,000. For James Wallace, Jr., a frame cottage at Ravenswood, 28 by 50 feet; cost \$4,000. For J. M. Kean, at Roger's Park, a frame Queen Anne cottage, two stories and attic, rock-face basement, 32 by 52 feet; cost \$4,000. All of the above are contracted and under way. Plans on the boards for a number of costly buildings, some of which will be ready for bids very soon.

Architect Geo. Beaumont reports: For Jno. Matthews, on Hall street, Lake View, an apartment building, two stories and basement, stone basement, frame above, 40 by 44 feet; cost \$5,000. Taking bids. For A. Reigelman, on Groveland Park avenue, residence, two stories and basement, stone front, 30 by 55 feet; cost \$5,500. Contracts not let. For Samuel Cohn, on Thirty-ninth street near Cottage Grove avenue, two-story and basement store and flat building, 22 by 60 feet; cost \$4,000. Contractors, J. M. Darling, mason, and F. Blair, carpenter. For John Pedgrift, on the corner of Racine avenue and Diversey street, a three-story brick store and apartment building, with Masonic hall, reception and banquet rooms on third floor, 46 by 86 feet; cost \$16,000; under way. For J. E. Church, on Lake avenue near Forty-second street, a brick residence, two stories and basement, 22 by 58 feet; cost \$5,000; under way.

Architect L. G. Quackenbush reports: L. C. Riggs, three two-story and basement dwellings at 866, 868 and 870 West Monroe street, Indiana, pressed brick and huff Bedford stone, hardwood finish and all modern improvements, 50 by 60 feet; cost \$10,000; under way: Wm. Egebrecht, contractor. Also for the same owner, two two-story and basement dwellings at 143 and Leavitt street, Indiana pressed brick and buff Bedford stone fronts, 40 by 40 feet; cost \$7,000; under way.

Architect J. J. Flanders reports: For Mrs. Mary E. Sands, a block of dwellings at 573 and 575 La Salle avenue, and a block of the same character at 511 and 513 West Jackson street, at a cost of \$15,000 each; both under way. For Board of Education, three-story and basement brick and stone school house, 110 by 116 feet on Laflin and York streets; cost \$5,000.

Architects Buling & Whitehouse report: For a Lodge of I.O.O.F., a five-story building on Chicago avenue, for the use of the lodge and business purposes, rock-faced stone and brick, with copper bay and tower features, 27 by 90 feet; cost \$25,000; contracts not let. For Edwin B. Sheldon, block of three dwellings, on the corner of Ontario and St. Clair streets, four-stories and basement, Dutch tile with stone trimmings, early English style, 50 by 76 feet; cost \$32,000; contracts being signed. For Edwin Walker, block of five dwellings on Wabash avenue and Thirty-third street, three-stories and basement, brick and stone; cost \$30,000; contracts not let. For S. A. Brown, residence on Michigan avenue and Twenty-sixth street, colonial in style, three-stories and basement, 56 by 76 feet; cost \$6,000; contracts not let. For Edwin H. Sheldon, store building on the corner of Quincy street and Fifth avenue, seven-stories, rock-faced stone, iron and brick, 40 by 100 feet; cost \$80,000; contracts not let. For Edwin Walker, residence of residence on Michigan avenue, at cost of \$8,000. For John de Koven, residence on the corner of Elm street and Dearborn avenue, three-stories and basement, of New York blue stone, 16 by 76 feet; cost \$18,000; contracts not let. For Miss Anna Wolf, block of three dwellings on Cottage Grove avenue and Thirty-third street, rock-faced stone; cost \$20,000; contractors, Fox & Hines, masons, F. C. Heath, carpenter. For Julius Wadsworth, of New York, store house on Canal street, brick and stone, 30 by 60 feet; cost \$16,000; contracts not let. For R. J. O. Hunter, residence at Kenwood, stone foundation, frame and shingle above, suburban villa style; cost \$7,500. Alteration of Dickey building, also building on corner of Michigan and Kinzie streets. Plans for church and parsonage at Omaha for the Episcopal Bishop of Nebraska, stone, natural face, to cost \$25,000. Drawings being made, also for a six-story building on Michigan street near State, to cost about \$30,000. Contracts being awarded for the Grant Memorial.

Architect E. R. Krause, reports: For R. H. Piratzky, on Blue Island avenue near Fourteenth street, store and flats building, three-stories, basement and attic, Anderson pressed brick front, terra-cotta trimmings, slate mansard roof, 55 by 140 feet; cost \$25,000; contracts not let.

Architects McAfee & Lively report plans on the boards for a double dwelling, 36 by 52 feet, for Mr. Nelson Monroe, to be located 3024 and 3026 Calumet avenue, to cost \$7,500. Milwaukee pressed brick, buff terra-cotta and buff-colored stone; large plate front windows, with stained glass transoms; oak finish and open fireplaces. Also two-story flat building, 21 by 52 feet, to cost \$3,500; Anderson pressed brick, red terra-cotta, galvanized iron, cornice and pine finish, wood mantels; to be built on Twelfth street near Robey; owner Mr. J. Richards, 320 Blue Island avenue. Also a \$3,000 building for store and flat for Max Strauss, to be built on Desplaines street, near Harrison.

Architect J. Spier, at a meeting of the board of education of District No. 2, town 38, range 14, Lake and Hyde Park, held Wednesday last, was selected as architect to offer plans for a new school house to be erected. It is expected that the new building will cost between \$80,000 and \$100,000.

Cincinnati, Ohio.—Architect De Jardins & Haygood report: Outlook for spring building was never better. Few buildings have as yet been submitted to the contractors, out there is plenty of work in the hands of the architects. Plans for J. F. Anderson for three and one-half-story brick building, containing twelve flats, 90 by 80 feet; cost \$25,000. For C. W. Breneman, a nine-room frame house, 40 by 60 feet; cost \$6,000. For J. H. Law, a twelve-room brick house, 50 by 70 feet; cost \$13,000. For Benj. W. Putnam, a twelve-room brick and stone building, 40 by 70 feet; cost \$15,000. For J. F. Anderson a fine stone residence, 50 by 75 feet; cost \$35,000. For Wilson Coal Company, at Washington, Indiana, a brick store building, 51 by 100 feet; cost \$18,000. For Collegiate Institute at Fairfield, Illinois, brick college building, 50 by 70 feet; cost \$9,000. For W. W. Watts, at Richmond, Kentucky, a fine brick and stone residence, 70 by 90 feet; cost \$30,000. For Aug. Bepler, row of brick houses, 90 by 50 feet; cost \$12,000. For A. Hoffman, at Mt. Sterling, Kentucky, a frame dwelling 40 by 60 feet; cost \$5,000.

Colorado Springs, Colo.—Real estate is advancing rapidly. Two railroads center here and good prospect for two more this year. There are already more buildings projected for the coming season than have been erected in the past three years. On the whole it seems fair to predict a boom, and that Colorado Springs will be one of the liveliest cities of its size in this section during the spring and summer season. Among the buildings now under way, for which the architect's name has not been obtained, are: Mr. J. J. Haggerman's two-story stone residence, 50 by 70 feet; cost \$50,000; Whipple & Roby, contractors. Geo. Aux's stone residence, to cost \$3,000; S. Ed. Sissons, builder. A dairy barn for Wilcox & Co., 50 by 200 feet; cost \$3,000; Ed. Brusol, builder. Colonel DeForrest contemplates the erection of a three-story frame residence, to cost \$20,000. W. Pastorius will build a two-story frame dwelling, to cost \$3,000. G. Coissig will erect a two-story frame dwelling, 25 by 40 feet; cost \$4,500.

Architect W. F. Ellis reports: A two-story brick business block, 50 by 180 feet, tin roof; cost \$10,000; projected. A two-story stone and brick business block, 50 by 80 feet; cost \$6,500; projected. For Mrs. S. B. Pickett, two-story frame dwelling, 25 by 40 feet; cost \$3,000; under way; Jos. Dozier, builder. A two-story frame dwelling, 30 by 40 feet; cost \$6,000; projected. Also a two-story frame dwelling, 30 by 30 feet; cost \$3,000; projected.

Carthage, Ill.—Outlook fair.

Architect Geo. W. Payne reports a number of small jobs, ranging from \$600 to \$2,500. Also, that a roller mill is contemplated, and he has submitted drawings for an opera house, 50 by 130 feet; cost, \$12,000.

Covington, Ky.—It is rather early in the season for business, but the indications are favorable.

Architect E. H. Ashley reports: For E. J. Hickey, two-and-one-half-story brick residence, 30 by 60 feet; freestone trimmings; slate roof; cost \$5,500; under way. For Daniel McNamara, two-and-one-half-story brick residence, 34 by 37 feet; freestone trimmings; slate roof; cost, \$7,200; under way. For John A. Simpson, block of four three-story houses, 70 by 55 feet, pressed brick front, stone trimmings, slate roof; cost, \$12,000; just completed; James T. Thomas, builder. For H. & H. Loewenstein, three-story brick store and dwelling, 22 by 68 feet, tin roof; cost, \$4,000; under way; Craig & Loder, builders. For James Hasmuth, three-story brick building, 18 by 63 feet; tin roof; cost, \$3,500; under way; T. J. Keiley, builder. Also, some smaller work.

Clark, D. T.—Architects C. G. Maybury & Son, of Winona, Minn., report: For Wm. M. Reed, two-story frame dwelling, 30 by 42 feet; cost \$2,000; projected.

Creighton, Neb.—Architect W. K. Ball, of Creston, Iowa, reports: For Knox County Bank, two-story brick and stone building, 25 by 80 feet, metal roof; cost \$12,000; making plans.

Creston, Ia.—The building outlook is not flattering.

Architect W. K. Ball reports: For Odd-Fellows Society, two-story and basement hall building, 25 by 100 feet, brick, with stone trimmings; cost \$7,000; plans finished; contract not let. For C. J. Colby, two-story frame addition to residence, 28 by 46 feet; cost \$4,200; plans finished; contract not let.

Delta, Mich.—Architect I. Gillett, of Lansing, Mich., reports: For Oscar Hart, two-story brick dwelling, 57 by 36 feet; cost \$3,500; contract just let.

Dodge City, Kan.—Architect J. B. Legg, of St. Louis, Missouri, reports: Completing plans for a three-story brick hotel, 39 by 125 feet, seventy-two rooms, for York, Parker, Draper Mercantile Co.; cost about \$20,000.

East Saginaw, Mich.—Architect F. W. Hollister, of Saginaw, Mich., reports: For city, Emerson school building, 109 by 99 feet, in Sixth Ward, two-story, ten-room brick, slate roof; cost \$18,000; contract not let. For Clarence Hill, two-story Queen Anne residence, 40 by 70 feet, plain and ornamental brick and redwood shingles; cost \$6,000; contract not let. For N. Nathan, two-story Queen Anne residence, 44 by 78 feet, very ornamental, brick, and redwood shingles; cost \$8,000; under way; Michael Winkler, builder. For Stoltz & Son, two two-story stores, 44 by 100 feet, brick and stone; cost \$12,000; under way; Michael Winkler, builder.

Architect E. R. Prall reports: For G. F. Cross, two-story and basement stone building, 65 by 90 feet, buff Amherst cutstone trimmings; cost \$11,080; under way; Jerry Fisher, builder.

Fayette, Mo.—Architect M. Fred Bell, of Fulton, Mo., reports: For R. P. Williams, ten-room frame dwelling; cost \$9,000; under way; B. P. Wiggs, builder. For M. E. Boyd, eight-room brick residence; cost \$6,000; projected. For E. Overall, seven-room Queen Anne dwelling; cost \$5,000; projected.

Fulton, Mo.—Outlook for building is not as good as last year.

Architect M. Fred Bell reports: The contract for the erection and completion of the Missouri State Lunatic Asylum No. 3, at Nevada, Mo., was awarded to Theo. Lacoff of Fulton; amount \$166,400; the building will have a frontage of 546 feet, center building, five-stories high, three detached wings three-stories high, connected by fireproof corridors; the structure will be built of brick with stone trimmings, galvanized iron cornices, slate roof; contracts have been awarded for most of the work and it will be commenced at once, building is to be completed in eighteen months. Besides the above Mr. Bell reports considerable work in various parts of the state, which will be found elsewhere.

Gainesville, Ga.—The outlook for building is better than at any time in the past two years.

Architect T. P. Hudson reports: For H. H. Huggins, two-story brick store building 45 by 88.6 feet; cost about \$4,500; projected. Also smaller work, ranging from \$1,200 to \$2,500.

Grand Rapids, Mich.—Architect F. W. Hollister, of Saginaw, Mich., reports: For Michigan Soldiers Home, three-story brick and stone building, 258 by 120 feet, capacity 500 persons, slate roof; cost \$100,000; under way; Chas. Tiedke, builder.

Hannibal, Mo.—Architects Coddington & Hogg, of Kansas City, report: For James Hayward, frame dwelling, 34 by 38 feet, hardwood finish; cost \$3,500; taking figures.

La Crosse, Wis.—Architects C. G. Maybury & Son of Winona, Minn., report: For J. Stinemman, three-story brick store building, 34 by 80 feet; cost \$8,000; projected.

Lansing, Mich.—Building outlook for Lansing is good, no less than ten stores are projected for erection upon the main street, the coming summer.

Architect I. Gillett reports: For Charles Stevens, two-story dwelling, 44 by 36 feet, to be built of artificial stone and brick; cost \$4,000.

Lincoln, Ill.—Architect and engineer F. Wm. Raeder, of St. Louis, Mo., reports: For Lincoln Water Company, modified gravity pumping system; two million gallon duplex steam pumps; water tower of steel, 16 feet diameter, 100 feet high; cast-iron mains to the extent of five miles distribution; pumping station of brick and tiling combined; complete dwelling for engineer's family; also pumps and boiler house; materials are now on the road to Lincoln; cost will not be known correctly until work is completed. F. Wm. Raeder, of St. Louis, engineer; Hinds, Moffatt & Co., of Watertown, N. Y., contractors.

Macon City, Mo.—Architects Coddington & Hogg, of Kansas City, are making plans for frame residence, for J. M. Saurnett; cost \$2,800.

Marshalltown, Iowa.—Architect F. M. Ellis reports: For W. A. Wass, a two-story brick and stone residence, redwood roof, 34 by 46 feet; cost \$3,500; foundations in. For Attorney Smith, remodeling two-story frame residence, 31 by 43 feet, at cost of \$2,000.

Architect J. G. Weatherby reports: Plans for Mrs. J. E. Hazen for frame cottage, 32 by 44 feet; cost \$2,000; contract not let. For R. E. Sears, armory for Co. D, 1st regt. I. N. G., two stories, brick, 50 by 100 feet; cost \$7,000; contract not let.

Mexico, Mo.—Architect M. Fred Bell, of Fulton, Mo., reports: For Banker H. H. Ricketts, eleven-room frame residence; cost, \$7,000; under way; H. D. Hunter, builder.

Nevada, Mo.—Architect M. Fred Bell, of Fulton, Mo., reports: Addition to Cotley College; cost \$5,000; projected. For W. J. Dyer, six-room Queen Anne dwelling; cost, \$3,500; under way.

New Hampton, Iowa.—Architects S. Brown & Son report: For John Kress, a two-story and basement brick hotel, 40 by 50 feet; cost \$3,000. For Catholic church, addition 35 by 40 feet and bell tower, at cost of \$1,500. Many small dwellings. For the Congregational Society, a church building, 38 by 58 feet, Queen Anne style, after plans by Architect A. M. Ratcliff, of St. Paul, to cost \$3,500; Brown & Son superintending. Prospect good for next season.

Ottumwa, Iowa.—Architect Edward Clark reports: For Nelson Glatfelter, at Birmingham, Iowa, a two-story frame residence, shingle roof, 30 by 50 feet; cost \$2,400; under way. For W. G. Crow, at Eldon, Iowa, a two-story and basement store and office building, brick, trimmed with white Bedford cutstone and galvanized iron, gravel roof, stone foundation, 24 by 80 feet; cost \$3,200; under way.

Paris, Mo.—Architects Coddington & Hogg, of Kansas City, report: For T. L. Pitts, frame cottage, 38 by 53 feet; cost, \$3,500; plans finished.

Parkville, Mo.—Architects Coddington & Hogg, of Kansas City, report: For Park College, two-story chapel, 72 by 72 feet: first story rough range work, second story frame; cost, \$10,000; under way.

Richmond, Ind.—Building business is rather quiet for this time of the year.

Architect John A. Hasecoeter reports three two-story dwellings, ranging from \$1,200 to \$1,600 each.

Saginaw, Mich.—Business is fair; outlook favorable. There are good prospects for a \$200,000 government building, and a \$100,000 library building at East Saginaw.

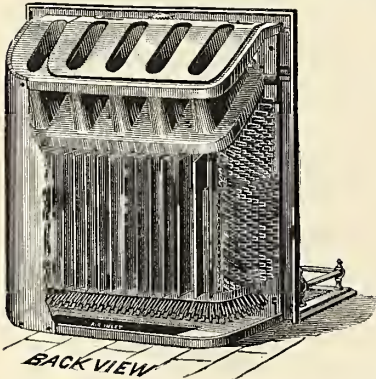
Architect F. W. Hollister reports: For city of Saginaw, Sixth Ward, school; eight room brick veneer building, 86 by 84 feet, slate roof; cost, \$14,000; under way; Schwartz & Ruff, builders. For same, Second Ward school, two-story brick veneer building, 84 by 96 feet, eight rooms; cost, \$15,000; contract not let yet. For Arthur Hill, two-story Queen Anne residence, 71 by 92 feet, brick and stone, ornamental slate and redwood shingle roof; cost, \$20,000; under way; Schwartz & Ruff, builders. For Mrs. James Hay, three-story modern residence, 55 by 84 feet, brick and stone, slate roof; cost, \$18,000; contract not let. For J. E. Vincent, two-story Queen Anne residence, 40 by 70 feet, stone foundation, redwood shingles, ornamental; cost, \$5,000; under way; Morley & Clark, builders. For Kehoe Bros., two two-story Queen Anne dwellings, 30 by 58 feet; both cost \$6,000. For Christ Hessler two-story brick store building, 60 by 80 feet; cost, \$8,000; contract not let. For Arthur Barnard, two-story brick block of six stores, 132 by 100 feet; cost, \$12,000; under way; work done by the day.

San Antonio, Texas.—The federal government is erecting officers' quarters and barracks. Brickwork on same is about completed. First National Bank, hospital, and some smaller work is in progress. Has been very dull here up to November, 1885, but improved somewhat since then. A steady business for the present and immediate future may be expected.

Architects Wahrenberger & Beckmann report: For city of San Antonio and county of Bexar Texas, city and county, joint hospital, 182 by 127 feet, two-stories; outside walls of local hard limestone, inside walls Rio Grande brick, administration building, with two L for ward buildings, capacity, 80 patients; cost \$32,720; under way; Niggli & Witte, contractors. For John A. Green, two-story frame dwelling, 40 by 50 feet; cost \$5,500; just commenced; Charles Frey, builder. For Geo. Koerner, two-story brick residence, 45 by 50 feet; cost \$6,500; contract just let; Adam Fisher, builder. For C. P. Matlack, city engineer, one-story dwelling, 50 by 64 feet, soft limestone front; cost \$3,500; walls nearly up; Pauly & Diemann, builders. For St. Johns Lutheran congregation, brick church building, 43 by 80 feet; cost \$7,750; contract awarded February 20, to Niggli & Witte, builders. For Harnish & Baer, addition of two-stories and new front to store building, 25 by 55 feet; cost \$4,600; contract awarded February 20, to Neumaun & Lindahl, builders. For Nic. Teugg, two-story stone store building, 33 by 130 feet; cost \$12,217; contract let February 20, to G. W. Konkle, builder. These architects also report: For state of Coahuila, Mexico (to be built in the city of Taltillo), theater building 80 by 141 feet, framed and covered with corrugated iron and tin roof; it will contain parquet, parterre circle and dress circle; cost \$37,500; frame is up, John Waite, contractor. Also a one-story brick store building, 35 by 60 feet; cost about \$2,000.

Terre Haute, Ind.—It is thought that no building of importance will be done here this season.
Architect W. H. Floyd reports: For A. Meyer, brick residence; cost \$8,000; D. Herzell, builder. For L. Hunel, frame residence; cost \$4,000; contract not let.
Architect Vridagh: For the city, high school building; cost \$40,000; J. Robinson, contractor.
Traverse City, Michigan.—Architect J. W. Hilton reports: For J. Fawle, Jr., a one-and-a-half story frame cottage, 26 by 32 feet; Samuel Wood, Jr., contractor. For Judge Hatch, a \$1,200 improvement. Additions to Congregational church for Sunday-school rooms, at cost of \$1,800.
Valley Falls, Kan.—Architect H. M. Hadley, of Topeka, Kan., reports: For M. P. Hilger, two-story and basement stone and brick hotel building, 34 by 90 feet, tin roof, galvanized iron cornice; cost \$10,000; plans not yet furnished.
Winona, Minn.—Architects C. G. Maybury & Son report: For the Bohemian Catholic Society, brick church building, 44 by 120 feet; cost \$10,000; under way. For W. L. Nevins & Bro., two-story brick livery stable, 110 by 140 feet; cost \$10,000; material purchased, work not yet commenced. For H. W. Lamberton, remodeling brick building, 23 by 80 feet; cost \$9,000; work done by the day. For John L. Harris, two-and-one-half-story frame dwelling, 40 by 42 feet; cost \$2,500; projected,

PRICES OF LABOR.	Akron, O.	Austin, Tex.	Bloomington, Ind.	Buffalo, N. Y.	Chicago, Ill.	Cheyenne, W. T.	Cincinnati, O.	Dubuque, Ia.	Des Moines, Ia.	Detroit, Mich.	Evansville, Ind.	Fargo, D. T.	Hastings, Neb.	Joliet, Ill.	Kansas City, Mo.	Minneapolis, Minn.	Omaha, Neb.	Sioux City, Ia.	St. Louis, Mo.	Toledo, O.
Bricklayer	\$3 00	\$4 00	\$4 00	\$3 00	3 50@4 00	\$6 00	\$4 50	\$4 00	\$4 00	3 50	\$3 75	\$3 50	\$4 00	\$4 00	\$3 50	\$4 00	\$4 00	\$4 00	\$4 50	\$4 50
Brickmason (Front)	5 00	5 00	5 00	3 00	4 50@5 00	10 00	4 50	5 00	4 50	4 00	4 50	4 00	4 50	4 00	4 00	4 00	4 00	4 50	5 00	6 00
Carpenter	2 50	2 50	2 50	2 50	2 50@2 75	3 50	2 50	2 75	2 50	1 75@2 00	2 00	3 00	2 25	2 50	3 00	2 50	2 50	2 50	2 50	3 00
Cabinetmaker						3 00			3 00	2 25						3 50	2 50		2 50	3 00
Finisher		3 00			3 00	3 50	3 00		2 50	2 25			2 50			3 00	3 00		2 75	3 00
Gasfitter				3 50	2 50@3 00	3 25	3 25	2 50	2 00	2 50	3 50	3 00	3 00	2 50	3 00	3 00	4 00	4 00	3 50	3 50
Laborer	1 75	1 50	1 50	1 25	1 25@1 75	2 50	1 50	1 50	1 75	1 50	2 00	1 75	1 50	1 50	1 50	1 50	1 50	1 50	1 50	2 50
Painter	2 25	2 50		2 00	2 25@2 50	3 00	2 50	2 50	2 25	2 25	2 50	2 50	2 00	2 25	2 00	2 75	2 50	2 50	2 50	3 00
Glazier				2 00		3 50			2 25	2 50	2 50	2 50	2 00	2 50	2 00	3 00	3 00		2 50	2 50
Plasterer	2 50	3 50@4 00	3 50	3 00	8 hrs. 3 50	4 50	3 50	3 00	3 50	3 00@3 50	3 00	3 00	3 00	3 00	3 00	4 00	4 50	3 00	4 50	5 00
Plumber		2 50@3 00		3 50	3 50@4 00	4 00	3 50	3 00	3 00	3 00@3 50	5 00	3 00	3 00	3 00	4 00	4 50	5 00		3 50	5 00
Stonemason	3 00	3 50	2 50	3 00	4 00	5 00	3 50	3 50	3 50	3 50	5 00	5 00	3 00	3 00	3 00	3 00	3 50	3 50	4 00	4 00
Carver	5 00	5 00	4 00	5 00	4 50@5 00	4 50	5 50	5 00	5 00	5 00	5 00					4 00	5 00		3 00	6 00
Stonemason	3 50	4 00	4 00	3 50	3 75@4 00	5 50	3 50	3 50	4 00	3 00	3 00		4 00	3 50	2 75	4 00	4 00		4 00	4 00
Stonesetter	3 50	3 50	3 50	3 00	4 00	4 00	4 00		4 50	3 50	3 50		3 00	3 00	3 50	4 00	4 00		4 00	4 50
Roofer (Tin)			2 75	75	2 75	3 25	2 75	2 50	2 00	2 00	3 00	3 00	3 00	2 50	2 75	2 50	3 00		2 50	2 50
Slatier			2 75	3 00	3 00	3 25	3 25	3 50	3 00	2 00	3 00		3 00	2 50	2 50	3 00			3 00	2 50
Stairbuilder		3 50	3 00	3 00	2 25@3 75	3 25	2 75		3 25	2 00@2 50	3 00	5 00		4 00	3 00	2 50	5 00		3 00	5 50
Steamfitter				3 50	3 50	3 50	2 50	3 50	3 25	2 00@2 50		3 00	3 50	3 00	3 50	3 50	4 00		3 50	3 00

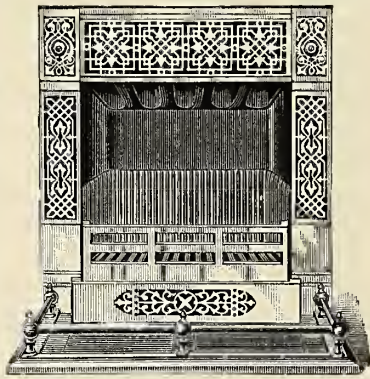


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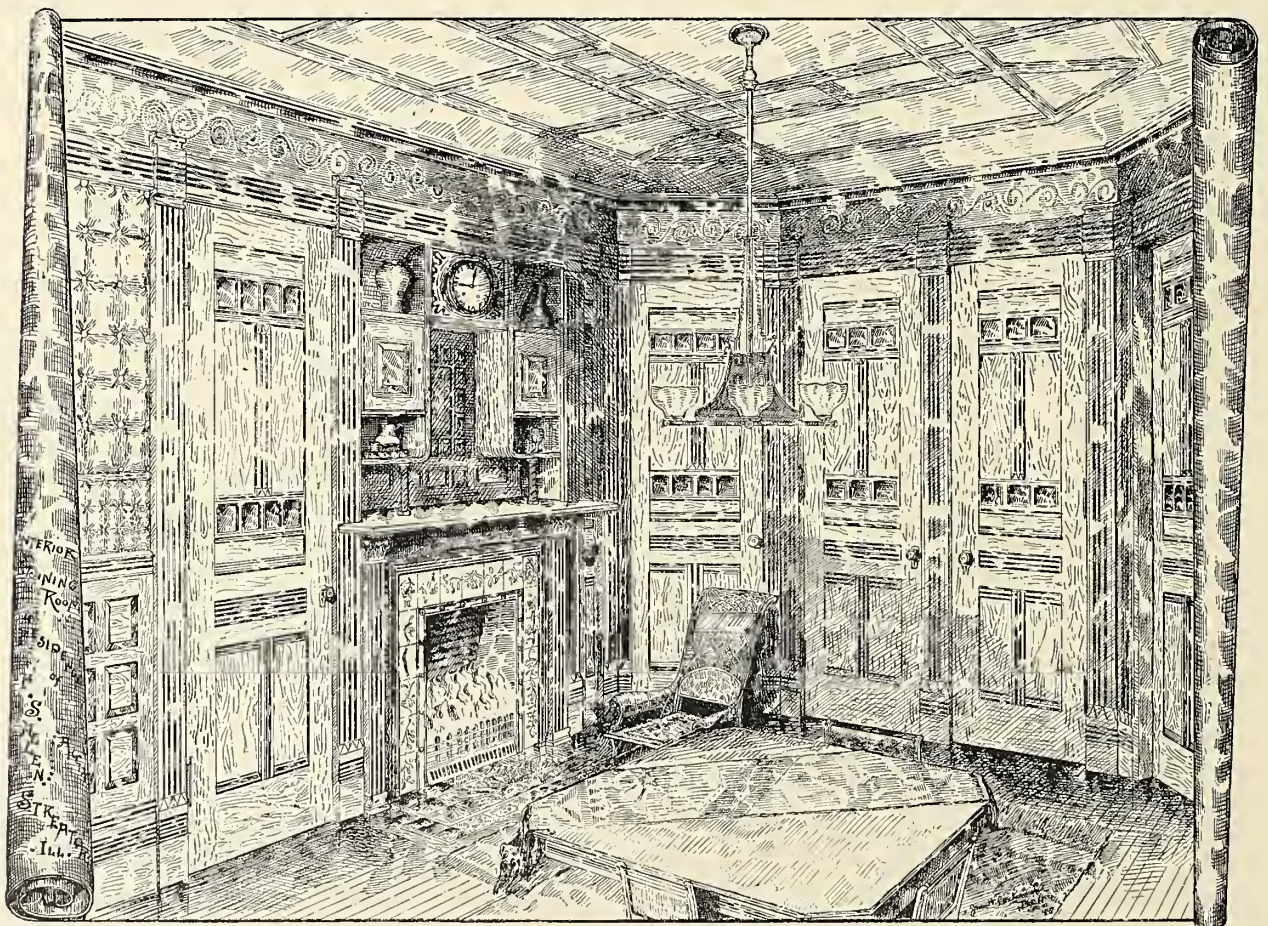
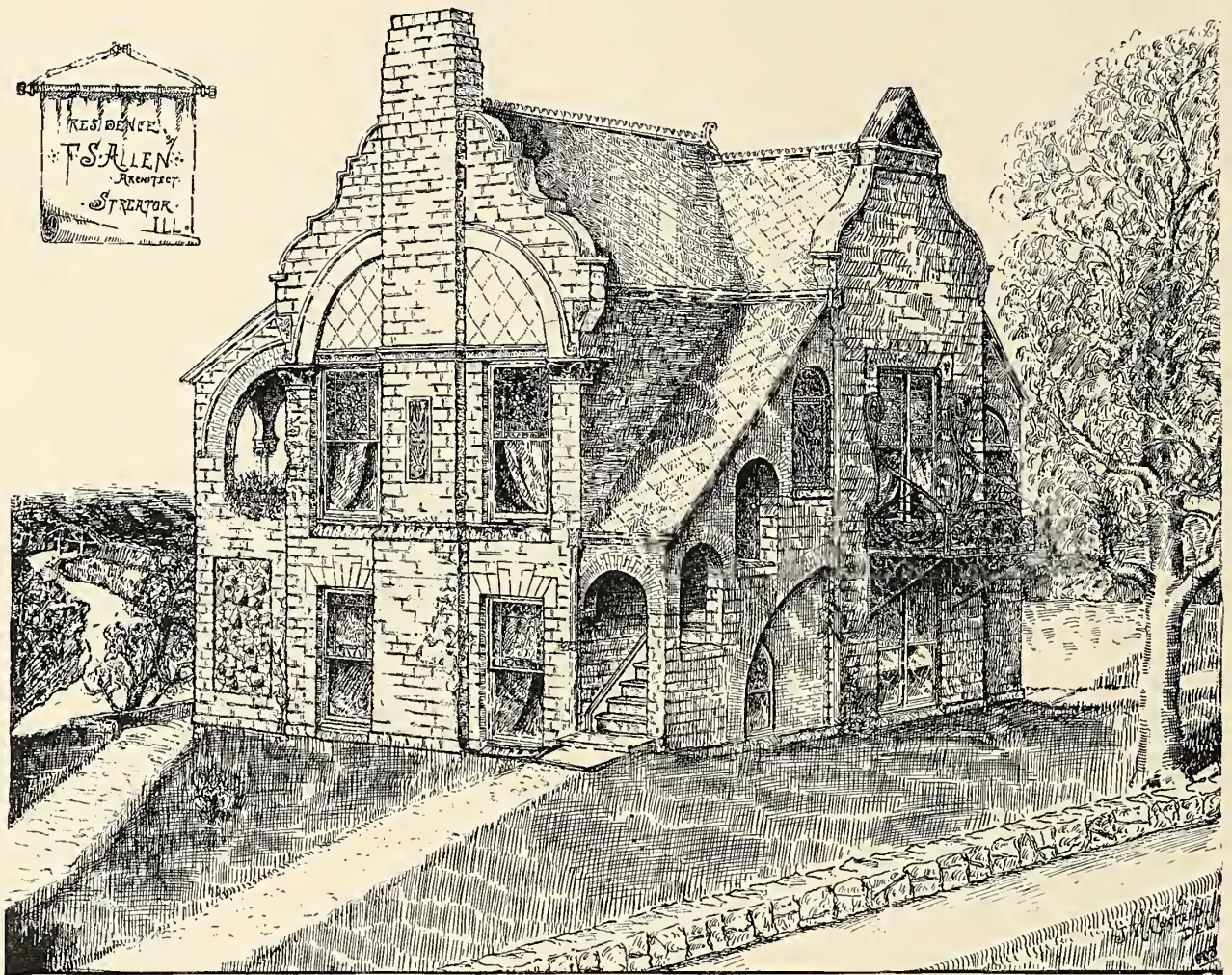
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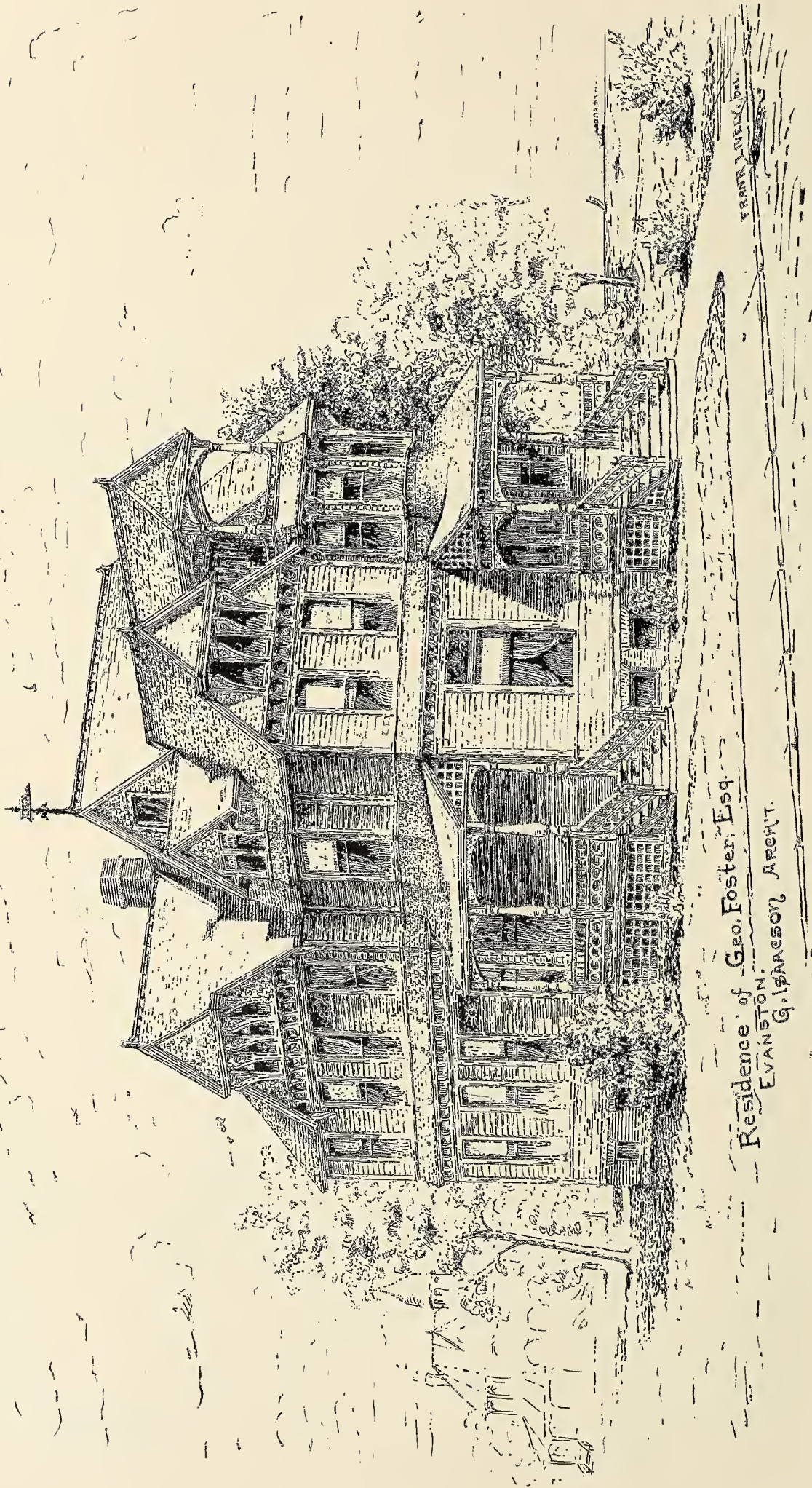
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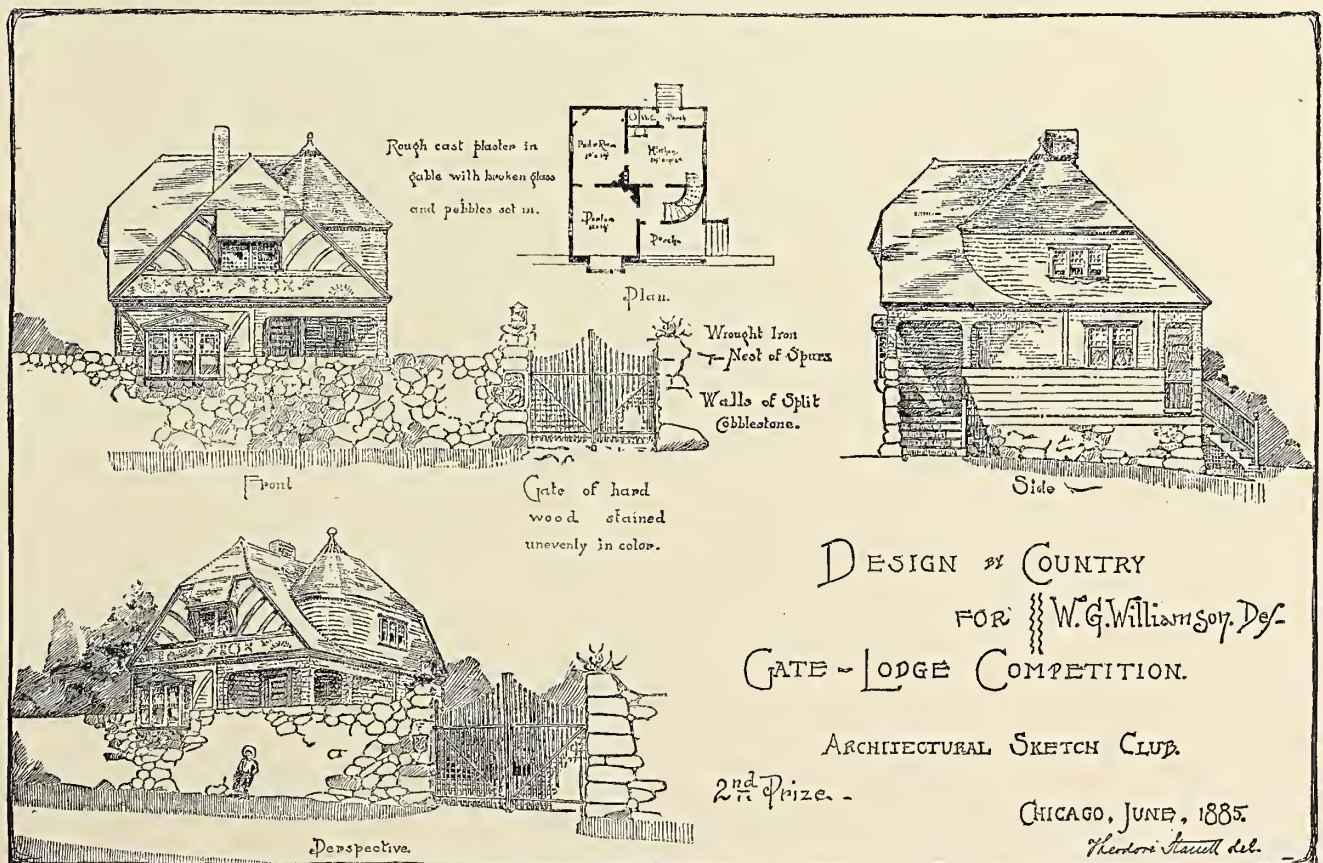




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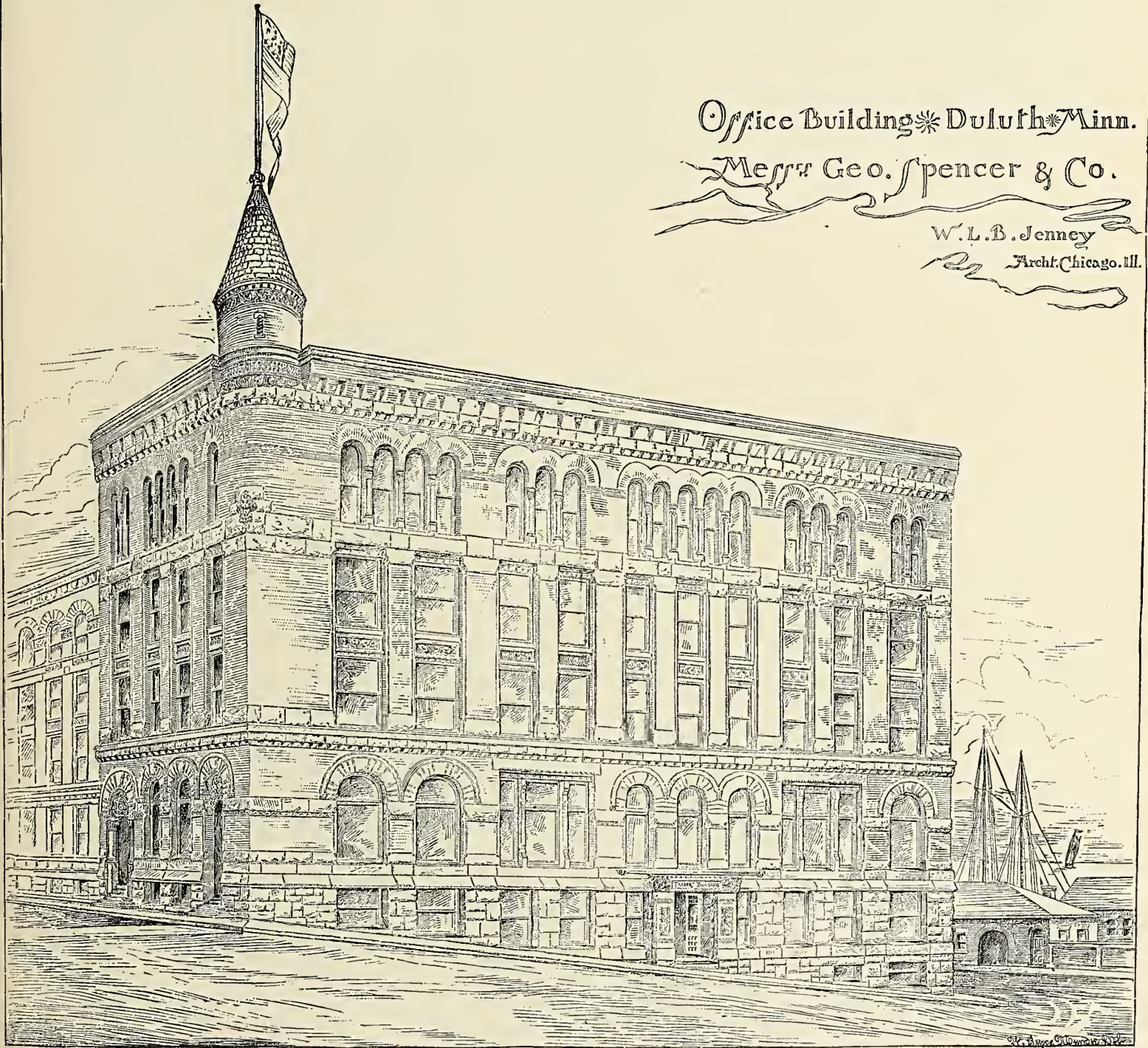
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(WITH AN INTERMEDIATE NEWS NUMBER)
DEVOTED TO WESTERN INTERESTS.

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(A NATIONAL ORGANIZATION.)

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DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

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ON March 1, the Hon. Abram S. Hewitt, on behalf of the American Institute and the Western Association, introduced the bill, as revised by a joint committee of these associations from the original bill presented by Mr. Stockslager, to establish the office of commissioner of architecture and a board of public building of the United States. The committee appointed on the part of the American Institute, Architects A. J. Bloor, O. P. Hatfield and E. T. Littell, and that on the part of the Western Association, Architects Dankmar Adler, D. H. Burnham and J. F. Alexander, to take charge of this bill, were recently in Washington. A favorable reception was accorded them by the house committee on public buildings and grounds, the members of which being so well impressed by the tenor of the bill as to recommend a further hearing when a full attendance of that committee could be arranged for. As the bill is based upon that introduced by Mr. Stockslager at the second session of the forty-eighth congress, and revised and reported to the committee on public buildings and grounds, it is now in admirable shape to be passed, as the undoubted benefits to the public should make it popular with both house and senate. Every architect, every public officer and every citizen should first read the proposed law carefully, and decide upon its merits, and then give it the hearty support it calls for. We need but to point to the public buildings of the United States, with hardly an exception, and their unreasonable cost, to convince any sensible person of the imperative need for a thorough change in the administration of the country's architectural affairs. The bill, as presented, is printed, and copies can be procured upon application to

A. J. Bloor, 55 Liberty street, New York, or can be found in the official report of the Western Association convention, published in THE INLAND ARCHITECT for November last, volume vi., number 5, page 73, copies of which can be obtained upon application.

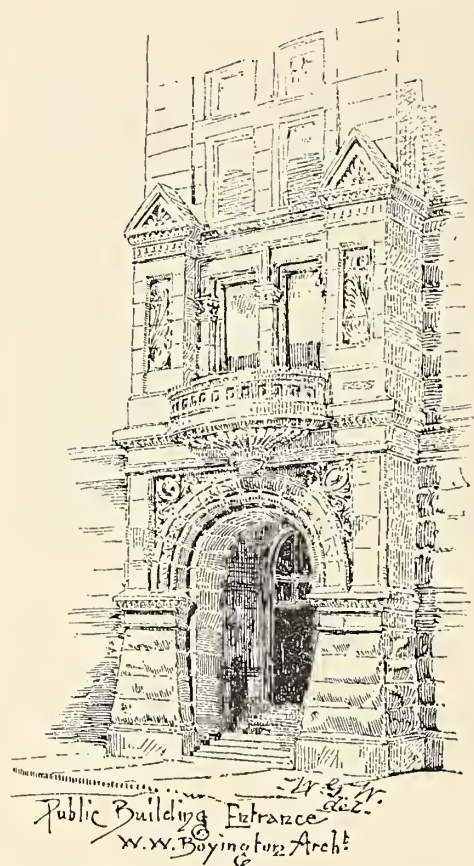
TEXAS architects have not delayed in striking at the root of the "competition" evil, and in their first effort have met with signal success. The commissioners of Bosque county advertised for competitive plans for a court house, upon which a meeting of the executive committee of the Texas State Association was called and the following resolution adopted and presented to the board of commissioners:

Resolved, That the chairman of the executive committee of the Texas State Association of Architects be and is hereby authorized to represent to the commissioners' court of Bosque county, now in session to select plans and bids for a court house, that the architects present are not prepared, and would not meet contractors in competition on election of plans for public or private buildings. That all precedent and true practice in the profession of building forbids as being unfair, partial, demoralizing and financially disadvantageous to the county or parties so doing, and the code of rules and practice of architects throughout the United States forbids any such practices as have lately been pursued by contractors before commissioners' court, and pray the commissioners' court of Bosque county not to countenance any such practice as accepting contractors' bids on their own plans at their own price, and in the event of the court considering plans through the contractors, then the architects present will withhold their plans from competition. (Signed) John Andrewartha, chairman; J. E. Flanders, W. C. Dodson, members executive committee; J. J. Kane, president association; A. B. Bristol and Mr. Clark.

After hearing a discussion on both sides of the question, the commissioners' court decided to sustain the architects and reject the contractors. This decided victory should not only encourage the architects of Texas, but those of every state, to persevere. Public officers readily see that recommendations made by the architects are largely in the public interest when they are presented properly. It also shows how easily the work is accomplished when action is unanimous. A celebrated senator once said in regard to specie payment: "The way to resume is to resume." The Texas association has demonstrated that this remark may also apply to architectural affairs.

THE Michigan Central Railway Company have under consideration plans for a depot at Falls View, Niagara Falls, which will greatly add to the railway architecture of the country, and no inconsiderable degree to the attractiveness of the Falls. The company now have under consideration designs for a depot that will, in architectural effect, thoroughly harmonize with the picturesque surroundings, and at the same time in arrangement and construction be fully adequate to the purposes of the road. No one interest is so alive to the practical value of fine architectural effects as the railway corporations.

Illinois State Association.



AT the meeting of March 4, the subject of the sanitation of buildings was discussed. The gentlemen invited to lead the discussion are leading authorities on the subject in the West. They were Dr. Oscar De Wolf, the city health commissioner; W. H. Genung, chief sanitary inspector, and Dr. J. E. Gilman, all of whom discussed the subject at length.

The usual lunch was served, after which the meeting was called to order by President D. H. Burnham. Secretary L. H. Sullivan read the minutes of the previous meeting, which were approved.

The secretary then read the following communication from C. E. Illsley, architect, of St. Louis. Mr. Illsley is a member of the Board of Directors of the Western Association, and his letter was listened to with marked attention, and

frequently referred to by the speakers. It read as follows:

ST. LOUIS, March 2, 1886.

MR. L. H. SULLIVAN, ARCHITECT, Sec. Illinois Association of Architects:

MY DEAR SIR,—I beg leave to offer a few topics for discussion at the next meeting of the Illinois State Association of Architects, should they meet the approval of the members. I learn that the subject for consideration will be sanitary arrangements.

The profession of sanitary engineer is a very new one, and while it is calculated to be of great utility in its proper sphere, there has been little or no attempt thus far to define that sphere. As in some directions it borders closely on that of architecture, and shows a tendency to overlap it sometimes, architects may do well to begin to consider how and where the line shall be drawn. Shall architects permit and invite the intervention of the sanitary engineer in the planning and superintendence of the sanitary arrangements of new buildings, thus proclaiming their own incapacity, and abandoning this part of their former duties? If this is to be the practice of the future what will be the consequences in the standing of the architectural profession before the public and in the qualifications of its members? If they relinquish a part of their legitimate field to one class of specialist in this manner, will not other inroads follow by other specialists to the ultimate deterioration and discredit of the architectural profession? Is it not to the interest of owners likewise that architects qualify themselves for such sanitary work as is required in buildings, and retain control of it? Will not their practical familiarity with all the other parts of the building constitute them better judges of the merits of sanitary apparatus than a sanitary engineer, who, as a specialist, will be disposed naturally to give undue precedence to costly, intricate, and sometimes dubious sanitary refinements, and whose lack of familiarity with all the details of building will disqualify him for properly subordinating the sanitary work?

While not disposed to deny the proposition that the connection between house drains and street sewers should be so intercepted as to prevent the ready entrance of air from the latter into the house, is it not true that an unreasonable importance is attached to this matter to the neglect of others more serious? Whatever may be the case with old cities whose badly built sewers never completely empty themselves, and cannot ever be cleaned, and are therefore reeking with overpowering fumes from decomposing filth, a very large proportion of our modern cities are sewered in such way that there is a rapid flow to the common outlet, and sewage is discharged entirely within a few hours at most and long before it has had time to decompose. In such cases the proper arrangement of drains, soil pipe, waste pipe, etc., on the house side of the sewer is far more important to health than is the exclusion of "sewer gas," and, except for possible consequences during an epidemic of some zymotic disease, there is much reason to question whether on the whole the house system would not be purer were the obstructing trap to the sewer left out.

The question of ground air and its passage up through the cellars of houses has received comparatively little attention as yet, but in view of the evidence of the ready flow of air from depths of several feet up or down, with changes of barometric pressure, and of the large amount of building on made ground filled with rubbish, whose nature is never inquired into, it may be well to consider whether additional precautions are advisable.

I am sensible that the foregoing bears the marks of haste, but I hope the importance of the subjects referred to may make them acceptable even though crudely set forth.

I am, very respectfully yours,

C. E. ILLSLEY.

President D. H. Burnham: We shall now have the pleasure of listening to one of our public officers, Dr. De Wolf, health commissioner. Mr. Genung, the chief inspector, and Dr. J. E. Gilman, a prominent practising physician, have also done us the honor to be present.

Mr. President and Gentlemen,—On first glance at your subject—"The Sanitary Aspects of Architecture"—the thought comes to me that the absence of architecture is the sanitary condition. The death rate of children in a community is the most delicate sanitary barometer, and when, in the study of vital statistics, we learn that the Mormon mother, and the mothers of far off Norway lose only 19 per centum of their children before the fifth year, while in our pretentious American cities, where architecture is fast becoming a culture, and the inevitable and desirable result of increase of wealth and elevation of taste, we are losing from 30 to 41 per centum of our children, we are led to inquire, has modern architecture anything to do with this fact? I would venture to say that our death-rate of children above the normal—I say normal because it is the inevitable—of about 12 to 15 per centum, was due to a variety of causes, as neglect, heredity, improper food—and I should place improper food as a most important factor in this country, for the glass manufacturers report the manufacture and sale of 10,000,000 nursing bottles in America during the year 1885, and every physician understands the fact that the manufacture of artificial foods for infants has become a national industry

almost—but after all these causes of infant mortality are eliminated, I think we may claim that there still remains a per centum of credit due to the free enjoyment of sunlight and pure air, which the Mormon mother and child and the Norwegian receives to the fullest extent, and which we do not. We have here, then, a base line from which we may take a reckoning.

Healthy living in healthy homes, therefore, demands the fullest admission of sunlight and fresh air compatible with the artificial warmth which our climate requires. This essential result cannot be secured advantageously through windows having deep recesses and heavy overhanging "belt" courses, or through "freize" or "dormer" windows, as usually constructed.

Deeply recessed or shaded windows are usually damp, if not positively filthy, caused by accumulations from damp atmospheres, condensation on surface of glass beyond the free sweep of sun and wind. No contained air of a room can ordinarily long remain injuriously impure under the free action of the sun's rays. Vegetation cannot thrive without this sunlight, and without it human life is dwarfed. How important that this vivifying influence should stream through our homes; how doubly important that it flood the nursery.

But I call your attention, especially in this connection, to the business buildings of this section of our city. I understand perfectly well the conditions here which hedge you about, and how impossible it is to erect five to nine-story edifices on streets sixty feet wide and admit direct sun rays to many apartments; nevertheless, we must not overlook the penalty we pay for accepting such conditions. I am writing this sheet February 23, 11 A.M. The sun is shining brightly. I step across to the county side of the building, and enter the recorder's offices. Here I find ninety-four writers, mostly ladies, forty-one of whom are bending over their books with the glare of an electric light on their faces. Several others are at work in a kind of twilight, which they prefer to the unpleasant effect of the artificial light on the eye. The faces there are pale and bloodless. I am convinced that could the health history of each individual occupant of these dark rooms be carefully traced through a series of years, the map of evidence would be curiously illustrative of the wide prevalence of what may be called the architectural causes of disease. It is a class of causes with which neither you nor myself can at present deal directly or effectively, yet, it is no less our duty to awaken public attention, mold public opinion, and direct public intelligence in regard to it, confidently awaiting that "millennial period" when your profession shall be able to harmonize the purest principles of your beautiful art in the construction both of houses, offices and places of public resort, with all the necessary conditions which nature so lavishly provides for the prolongation and enjoyment of life and of health. It has seemed to me that in this country we are peculiarly indifferent to the introduction of direct sunlight into sleeping apartments, upon the theory, I suppose, that these rooms are generally occupied during the night, and therefore, those who occupy cannot be benefited by sun's rays during occupancy, as they would be in the rooms called living-rooms. These apartments are, in fact, the living-rooms of a very large proportion of all classes of men, for the time they pass in them is twice the period they ordinarily occupy any and all other apartments of their home, and, although darkness is round about them while they sleep, they singularly forget the vivifying and purifying influence of sunlight to everything in and about those rooms while they are unoccupied, and the necessity of thus preparing them for healthy occupancy.

In referring to ventilation, I will not review with you the tables of Box, or De Chaumont, or Parkes as to the amount of air required to keep an occupied room free from perceptible odor, or the cubic or floor space which each individual should be allowed, not because such facts are valueless from the sanitary point—for they have great value,—but because this information is classical, so to speak, and always tabulated for professional use; yet the basic facts upon which such rules are predicated are not always appreciated by your profession, and do not receive in architectural construction, public and private, that very careful consideration which their sanitary importance demands. Ventilation should mean to the architect what it means to the sanitarian, to wit, the removal of air unfit to be respired, and the supply of pure air adequate in every feature of quantity, purity and temperature. Nevertheless, it would be safe to assert that in all this great city of one hundred thousand buildings there are not one hundred, either public or private, that will bear successfully this sanitary scrutiny. The incessant decomposition of organic matter within the human organism, by processes which we call functional life, develops a subtle and destructive poison, which thrown off from the surface of the body and at each respiratory movement, contaminates a cubic foot of air, and if it were possible for this human exhalation to be tinted with some coloring matter and become darker in proportion to its increased unfitness for inhalation we should in all our assemblage within walls find ourselves enveloped in a dense cloud, the visible appearance of which would cause us to fly from a danger so clearly apparent.

The effect of this contamination upon the blood, which fails to find in its passage through the lungs the air essential for its purification, is seen in the physical degeneration of man, observed in all over-crowded cities, and a general depreciation of both the physical and moral attributes. The pallid faces of woman and child, the lassitude of body and loss of energy among men are all accompaniments, at least, of impure air in our homes and places of business.

This city has not been afflicted with a great number of the large, over-crowded, squalid and vile tenement-houses found in the older and principal cities of the eastern and middle states. The homes of the laboring classes in Chicago, of which you gentlemen design thousands each year, are smaller, but exhibit in many instances a deplorable absence of provisions for healthful living and comfort in general.

I understand perfectly well that, to the men of business who consult you regarding the design and construction of these houses, ventilation and sunlight hold a very inferior place. They are not saleable commodities in his reckoning, whose speculation looks to the largest possible returns from the smallest possible outlay. He cares little for transoms, ventilating-shafts, cubic allowance of air, open ground space in front and rear, and readily takes advantage of any inattention of the authorities to evade the carefully-drawn ordinances which would compel a different course.

Your profession has a great and legitimate duty here; a duty which, properly performed, will largely influence not only the sanitary condition, but the moral and political purity of any community in which that duty is conscientiously exercised.

Will you permit me a single word regarding detail of construction. Elaborate designs for the exteriors of buildings for human habitation are not generally conducive to health; in fact, it is the absence of ornateness that usually stands for one of the conditions of sanitary construction of dwellings; and, again, the interior finish of the house has much to do with its salubrious character.

The walls of our houses breathe, so to speak, by the direct passage of air through the material of which they are constructed, and if we smother and choke this respiratory movement by dressing the interior with an impervious finish, we interrupt, to just that extent, a natural means of ventilation, which should not be overlooked.

The site for the house and the preparation of that site require much consideration from the sanitary standpoint, for the moisture of the ground under and surrounding a dwelling is one of the weightiest importance to the occupants.

The role played by soil moisture in connection with the causes of disease has recently assumed much magnitude, since the results of the study of Bowditch, of Massachusetts, Buchanan, in England, and Pettenkofer, of Germany, have been given to the world. These studies are among the most important contributions to state medicine. Bowditch has shown that a high water level under and about the house site is one of the primal causes of consumption in Massachusetts, and probably throughout New England; and Dr. Buchanan, by a series of independent observations in England, has reached a similar conclusion, namely, that wetness of the soil under our homes is a cause of phthisis to the population living within them, and he adds that "this proposition may now be affirmed generally, and not only of particular districts."

During the years that have elapsed since these investigations were completed, the theory of soil moisture as a cause of disease has been strengthened by additional evidence from different parts of the world, and it may now be regarded as a well established law. The sanitary importance, therefore, of an architectural study as to the best means of reducing this soil moisture about our house site to a minimum will be apparent to you. The importance also, of a perfectly impervious wall and floor to all cellar and basement apartments will be equally apparent. Our soils in this western country are filled with—indeed, they are chiefly composed of—decomposing vegetable matter, and the artificial heat above the cellar line, in our homes, will draw into these homes converging currents of foul air from these soils, unless the walls and floor are absolutely impervious to such passage.

Prof. Pumpelly says, after some recent studies of the soil as a filter for air or water: "It appears probable that a dry gravel, or a dry coarse sand, interposes no barrier to the free entrance into houses built upon them of those bacterial organisms which may swarm in the ground around leaky drains, etc." This opinion corroborates the belief of all sanitarians that natural soils cannot be relied upon to purify polluted air or water passing through them. There are questions connected with the material of which buildings are constructed, and provision for escape of occupants in case of fire, which interest both the architect and the sanitarian—questions which should not be overlooked in a discussion of the sanitary aspects of architecture.

Dr. Richardson gives as the essential sanitary features of a home the following conditions:

1. It must be well filled with daylight from all points that can be charged with light from the sun without glare.
2. It must be charged with perfectly pure air, in steady, changing currents.
3. It must be maintained at an even temperature, and free from draughts.
4. The site, as well as the house, must be free from damp.
5. It must possess every facility for the removal of its impurities as fast as they are produced.

Gentlemen, I have not sought to weary you with long pages of detail as to how these conditions may be secured, but rather to discuss the reasons why you should attempt to accomplish these desirable results.

And now, Mr. President and gentlemen, I have not sought to weary you with long pages of details as to how these conditions may be secured, but rather to discuss with you the reasons why you should attempt to accomplish these desirable results.

Victor Hugo, in one of his novels, makes this statement, and draws this picture:—"In the old day, when an individual or a dynasty desired to transmit to the future its great work, it transmitted it by some magnificent structure, or by architectural tracing in a wall;" and he draws this sketch: He says, "An old monk is sitting before one of the fountains of the Notre Dame, in Paris, and trying to discover, trying to interpret the story which that tracing was sought to transmit to his day, and while engaged in this study, there is put into his hands one of Gutenberg's blocks, and he says, while looking at it, 'This will kill that!'" Printing will kill architecture.

That monk was wrong; he was in error. It only killed that aspect of architecture which he was studying. The Fifteenth Century and its customs have all gone in the light of the new day which is upon us. Printing has become the hand-servant of architecture. The printing-press not only scatters broadcast among the people the great and beneficent work in which you are engaged, but it transmits to posterity the glorious, the ennobling, and the immortal results of your best intellectual efforts.

Dr. J. E. Gilman was introduced by the president, and spoke as follows:

Mr. President and Gentlemen,—I appear before you under rather embarrassing circumstances. Dr. De Wolfe has gone through the whole line of argument and leaves nothing for me to do but simply emphasize or underscore what he has said.

There is no question but sunlight and pure air are the most important things we can get into our houses. Sunlight makes it impossible for the germs of disease to exist.

It seems to me that you, gentlemen, are the first and the prime sanitarians in the community. It is an old saying, "Take care of the pence and the pounds will take care of themselves;" and if you, in your construction of buildings, make due regard to the need of increased sunlight, it paves the way for a destruction of zymotic diseases. As an illustration, and to make it more explicit, some of the experiments made in the prosecution of the study of medicine—drugs, poisons—rattlesnake poison, etc., those in vials and kept from the sunlight, retain their virus, their vitality and strength, the longest. Allow the sunlight to come in contact with it and its strength becomes deteriorated. The same is true of our germs of diphtheria, consumption, etc.

The next thing is the introduction of pure air. Take a sick room, in which the air is imperfect, where the air is stagnant, and it is a very serious matter to go into that room. In a case of contagious disease, dilute the air and it is not able to overcome the vital resistance of the person entering the room.

Now, you will find in a great many of our houses, where the children grow up puny and the grown persons know hardly a day of perfect, uninterrupted health, that when they go into the country, where they are out-doors all the time, the result is apparent at once.

I intended to say something about consumption, but Dr. De Wolfe has forestalled me in that. Consumption is one of the diseases that all over the world carries off its victims by myriads. In England one-fourth of the mortality is due to death from consumption. In this country, in Massachusetts, one out of every six, of all causes, die from tubercular diseases. In our own state, one in perhaps about thirteen or fourteen from all causes, die of consumption. And there is nothing to fight the consumptive tendency equal to sunlight and pure air. These two things, with good and proper food, renders death from consumption very rare, comparatively speaking.

I can only underscore what the doctor has said, for I believe the health of the community is very largely in your hands; and it strikes me that this letter from the St. Louis architect, Mr. Hlesley, which your secretary has read, should be widened in its scope, instead of simply inquiring into the best methods of preventing sewer emanations. There is no question that the house serves as a grand chimney to draw up the earth's air, containing in its current these germs as they may be found floating there; and where large numbers of people are brought together, the earth speedily becomes contaminated with these organic elements, and so if the foundation is impervious to the earth's air, you carry off one certain way in which poisons may enter the house. Then if you prepare the way for the introduction of sunlight, you destroy these germs when they are there. If you allow free ingress in every room for a plentiful supply of fresh air, you dilute them to an extent to render them innocuous.

The President: What Dr. De Wolfe has said is in some measure known to us all. The doctor speaks of the wetness underneath our houses—the earth's dampness, and warns us against it. He speaks of the imperviousness of our walls to the admittance of the life-giving air, and warns us against that practice. And Dr. Gilman warns us against impure air in houses, especially for consumptives.

Now, we have gone somewhat into the theory of this subject and have heard it stated in the broad, but I would like to hear something more in particular from our public officers. I would like to hear from Mr. Genung what he has to say about the rules, as they are today, under which he is making his inspections, and what he considers as necessary things for us to do more specifically than has been done in this general way, and how strictly he is enabled to carry out his rules, and suggest how we can help the department in carrying out such rules.

Mr. W. H. Genung spoke as follows:

Gentlemen,—I am, like Dr. Gilman, at a disadvantage, in that I had no warning that I was expected to say a word. However, I am glad to be asked the question, "How much is being done and how much more can be done through legislation?"

I believe as this letter of Mr. Hlesley's states that this sanitary work should not be taken from the hands of the architects. They are certainly as well able as anyone to determine what the sanitary conditions ought to be. But after they are determined there ought to be some public officers. I do not know of a better officer than the Commissioner of Health to uphold uniformity in these sanitary regulations.

A few years ago, when the Commissioner of Health began his work, he began in a way almost the opposite of his predecessors. The Commissioner did not take it that a little heap of ashes was of any comparison in its destructive influences to the conditions existing within the homes of the people, where they were born, where they attempted to live and where they died. He began then a work which had for its purpose the compulsion of sanitary regulations in house construction. And he began in a mild way, because he did not believe he could re-construct this work altogether through the state legislature. He provided, so far as he could, perfect plumbing, draining, light and ventilation.

This has been in operation about four years only. He has been crippled in getting men and money to enforce this law. What he has done he has accomplished more by moral suasion, among architects and the plumbers, than he has by the money or assistance he had in the way of officers. However, the records there in the office show today that about 16,000 places of habitation have been submitted to him, under the law to bring about this uniformity of sanitary conditions in these places, and perhaps not more than 100 out of the 16,000 (I think I am safe in saying that) have violated any of these provisions.

What is most needed now is more legislation and a unity in the work between the Commissioner of Health and the architects and plumbers.

I would put the architect first, because he has the first to do with the house construction; he makes the plans, he builds that house on paper before anyone else has anything to do with it, and therefore he ought to be the first man selected. I do not know but what he ought to be held responsible. In order to bring about these results it will require harmonious action on your part with these public affairs to enforce these laws.

In order to enforce the laws after they are passed, there must be some money appropriated to pay inspectors to see that the work is carried out—not simply submit the plans and have them approved and then build any kind of a house afterward; it must be

carried out from the beginning to the end, and when that is done the mortality rate will be reduced several points.

The mortality rate of this city has been gradually growing less all the time, but it may seem strange to you that the mortality records would show that about fifty per cent. of all the children born die before they attain the age of five years. We do not claim that that can be taken away wholly through sanitary regulations or arrangements in building, but one-half ought to be taken away. Then there are zymotic diseases, which are classed as preventable, that can be reduced, certainly, through sanitary arrangements, which should be pointed out by the architect and made obligatory through his specifications.

There is one cause of death which does not seem to be understood, and I do not know that we understand it in the Health Department, but too little attention seems to be given to the grounds on which the building stands, the foundation and the draining of that ground, the air, the subsoil and water outside of the foundation walls. I do not know of half-a-dozen buildings in this town that have the surface drain tile placed outside the foundation wall or below it. There is no question but what nearly all our Chicago soil is polluted with surface filth which is carried with the water, and also from our drains. I do not know but what the doctor is right, also this letter of Mr. Hlesley's, in saying that there are other things more important to be kept out of the building than drain air. That may be, but I should certainly want this drain air kept out. I should want that space underneath the buildings hermetically sealed from the drains or any other pollution in the soil. The amount of air that moves through the soil is so great that it can be measured. A great many people would hardly think that possible, but it is so; and the diseases and germs which come through this pollution of the soil remain dormant by being kept in the dark and dampness, two conditions conducive to their existence. If they are permitted to get into the cellar, then the heat above it will draw them up through; and these are the little germs that destroy so much health. I heard a conversation a short time ago in which it was stated by eminent physicians that this disease germ was the cause of all diseases. Whether or not that is a fact we cannot determine, and we do not know whether we can draw a line where diseases begin and end that they are the cause of; but certainly with all contagious diseases they are the cause. This bacterial growth is something that seems to be little understood by architects. It is a living thing which produces disease but cannot be detected by the naked eye, and some people smile when we state what it is. When we talk about disease-germs, we talk about something so small that it requires a microscopic power of about 600 diameters to observe it at all. In other words, about a half a hundred of these little living disease-germs can pass through the eye of the smallest cambric needle, abreast, at one time.

DISCUSSION.

The President: How strict is the supervision of dwelling-houses? Do all plans of dwelling-houses come into your department?

Mr. Genung: I do not know exactly, but there is always one inspection made of any plan left at the office. In the case of tenement houses, where the landlord cares very little about the condition of affairs, and where the architect has been tricky, we stand right by it and keep hammering away until we get it fully up to the present requirements of the law. In the case of a house for one of our merchant princes to occupy, we pay very little attention to that, simply because that man would not have an unsanitary condition of things existing, and because we have not the force of inspectors to make the examination as it should be made.

The President: You speak of the tile-drainage of the building around the outside. We suppose that you go down to the water line. Now, you drain at that point. Do you think that would be efficacious as to the area contained inside the building?

Mr. Genung: Yes, sir; I do.

The President: Why would it not be a good provision of the statute that all basements occupied by people should be made of some impervious material?

Mr. Genung: I would go further than that and say, any ground surface under the building site. If we could only get the confidence of architects and have this embodied in a law, then we would only be at the mere cost of getting men enough to enforce that law.

Dr. De Wolfe: At your next meeting, if you will honor us with an invitation, we will have prepared an amendment to the state law in this direction. I told the Commercial Club a year ago: "Gentlemen, if you will add \$100,000 to my appropriation I will save one thousand lives in the city of Chicago in 1885." They said: "Certainly, doctor, we will add that to your appropriation." They gave me \$100,000, of which I spent \$47,000, and returned \$53,000 to the source from which it came. Now, by that inspection of 68,000 houses we saved nearly seven hundred lives last year—the difference in the death rate between 1885 and 1884. You see, therefore, the importance of a constant strain in this direction, and we must seek the effort from you. You are a very influential body of men. You can, if you will unite in an effort with the legislature, secure from that body anything which really moves in the direction of public good, having no private "axes to grind." And I shall be very glad to present at your next meeting such a paper as you desire, and shall feel perfectly confident of a successful result. There should be no tenement population in the basements of the houses of our city. In the next place, there should be no such thing as a cess-pool under the house. All this can be accomplished by your efforts.

The President: In regard to the question of having the exterior of the walls built of some material that the air could pass through, is it not true, doctor, that in our heated houses the air does not pass from the outside in so much as it would be liable, under the pressure of extra heat, to pass from the inside out.

Dr. De Wolfe: I have been influenced largely by Dr. Lincoln, of Boston. He says most distinctly, that the passage is uniformly from *without in*. Now, if that be true, I understand perfectly well that by dressing the interior of your walls with an impervious material you may form an absorbable matter generating from within the house, but that matter, according to Dr. Richardson, never remains within, but is immediately removed. I take this question from Dr. Lincoln, from Dr. Billings and others, and discussing it, gather from them that the passage of air is from *without in, principally*. And if that be true, it is an error to cover the interior of our rooms with an impervious material.

Mr. Bauman: I do not wish to follow this subject particularly further. But, Dr. De Wolfe has made one remark in his speech with which I would like to deal for a few moments, and that is, that the walls of the building should be dry; that the building should be so built that there is no dampness whatever within. This subject I took up over two years ago, in regard to the construction of our tall buildings which require walls of such thickness, and after absorbing the dampness will retain it for several years during the dry time. Now, I have thought there was no need of it. In the first place, when we erect a building of such dimensions, we want extra foundations; but if we build with a material one-half the weight of brick, we do not want such foundations, of course, but can get at the same

height. Then, if we take this tiling made of fire-clay, which is very strong, I have no doubt you can put that up twenty stories high, and the lower story of that will not be crushed by the superabundant weight.

Mr. McLean: Should not the buildings have foundations of some non-absorptive material to above the ground line? Will not brick, if the brick wall continues down below the ground line, or better still, to the water line, will not those brick absorb water and carry it by capillary attraction to the top of the wall?

It was strongly recommended that a course of some such substance as asphalt should be introduced about sixteen inches above the ground-line in all walls.

After considerable further discussion, the President said: It seems to me this discussion is of great importance, and as these gentlemen, Messrs. De Wolf, Gilman and Genung, are to be with us again, it would be a good idea to get the points for any action we may be able to bring to bear, as soon as possible (if it is thought best to devote the next meeting to this subject), in suggestions for a statutory enactment. I would like to have some gentleman make the motion.

Mr. Sullivan: I move that at our next meeting Commissioner De Wolf, Mr. Genung and Dr. Gilman be invited to meet us, and at that meeting the commissioner of health will present a draft for the revision of the law covering sanitation of buildings, and that the matter be then thoroughly discussed.

Mr. Bauman: As an amendment to that motion, I move that three of our principal plumbers be also invited to attend this discussion.

The President: I hope every member will devote as much spare time to thought on this subject as possible during the next month. It is of very great importance. These gentlemen have put it in our power to assist them to initiate the proper action, and if we each of us come prepared to say something, it will supplement all that has been done. I do not doubt but every word each gentleman will have to say will help somewhat. I hope that each will think the subject over carefully and get his mind into a good, sharp, crisp condition.

The motion was carried.

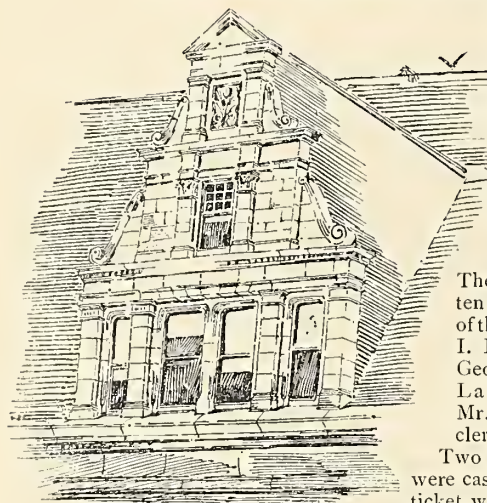
Mr. Sullivan: I move that a vote of thanks be tendered to these gentlemen (Messrs. De Wolf, Gilman and Genung.) Carried.

Mr. Randolph: I ask leave to invite Mr. Bailey, of the Ruttan Manufacturing Company, to attend our next meeting.

The President: There will be no objection.

The meeting adjourned.

Cincinnati Builders' Exchange.



A Dormer window.
Club sketch by Harry Iawrie.

THE regular annual election of officers of the Cincinnati Builders' Exchange took place March 2, at the quarters of the association. There were three tickets in the field, the Regular, the Independent, and the Scratchers' ticket.

The polls were opened at ten o'clock, and the judges of the election were Joseph I. Blair, L. B. Hancock, George H. Taylor and Lawrence Mendenhall. Mr. C. R. Brown acted as clerk.

Two hundred and two votes were cast. The entire Regular ticket, with the exception of two from the Independents, were elected, the result being as follows:

President, W. A. Megrue; vice-presidents, James Allison, Wm. J. Tanner.

Directors: Archie Colter, Patrick McAvooy, Samuel H. Taft, J. M. Blair, Edward Meiners.

Committee on Arbitration: Samuel Tappin, Lawrence Grace, John G. Evans, Dennis Flaherty.

Committee on Appeals: Wm. B. Foster, J. G. McGarvey, Val Heyl, John Sperry, L. H. Wilson, H. E. Holtzinger.

A very elaborate lunch, under the direction of Messrs. Lehmann and Basse, had been spread in the basement of the Exchange, at which about four hundred of the members and their invited friends participated, rendering the occasion a joyous and congratulatory one.

The annual meeting was held at the close of the election, at which the reports of the officers were read:

Mr. W. A. Megrue, the newly-elected president, on taking his seat delivered the following address:

Gentlemen of the Exchange: One year ago I was complimented by being elected to the presidency of the Exchange, and entered upon my duties with the purpose of contributing, so far as my judgment would admit, to its best interests. So far as I have succeeded in the past, I can only judge by the honor that has been conferred by the members of this body today. If the Exchange has succeeded in advancing the different interests it represents, to any degree, this fact must be largely attributed to the united efforts of the membership, and the healthy support it has received from an efficient and faithful board of trustees. During the past year important measures have been brought before us for consideration. Among these may be mentioned the registry bill. The committee appointed to act in connection with other coordinate bodies was successful in having a new registry law passed, which, though afterward declared unconstitutional, the board considers that its labors have not been in vain. It has created an interest among the better class of citizens, and has awakened such interests in the community as call for investigations that are now being made, and which may succeed in changing the

complexion of our political affairs. The new building laws have occupied our attention to a very large extent. This bill originated with the Exchange; but the magnitude of work in framing a code of building laws to meet the present demands and insure the approval of those in whom is invested the power to make such laws as could be enforced, was a work which your committee entered upon under great disadvantage and embarrassment. They succeeded in getting copies of all existing laws throughout the United States to select from; and through the courtesy of the Association of Ohio Architects, a special committee of architects (Messrs. McLaughlin, Hannaford and Crapsey, of Cincinnati) was appointed, who rendered to the board a vast amount of practical knowledge, and through them we have been enabled to complete the work, and have submitted to the legislature for approval a code of building laws unsurpassed by any state. The action taken by the Exchange in the interest of the Thirteenth Exposition is sufficient proof that though it had no official representative on the Board of Commissioners, it has received our undivided support. The Committee on Arbitration has proved a potent factor in amicably adjusting all matters in dispute submitted to them, as is demonstrated by the fact that no appeals have been asked for. I congratulate the officers and members today upon the success that has marked their interest and efforts during the past year; they should be sufficient to stimulate us to renewed effort in the coming year. It, therefore, becomes us to guard well our interests by all honorable means, to vindicate our rights so as to secure, as far as possible, the support and patronage of our own city—many of the property-holders of which manifest a disposition to favor outside competition. I do not hesitate to assume the responsibility of expressing the sentiments of the Exchange, which are, that there are competent architects and responsible builders in Cincinnati, whose hard-earned reputations and practical knowledge entitle them to consideration from those who seem disposed to seek competition in sister cities in the construction of prominent buildings.

The report of the treasurer, Mr. J. M. Blair, showed the good financial condition of the association, showing a balance in the treasury of \$1,171.46. In conclusion of the report, Mr. Blair made a comparative showing of the increase of membership, which on March 1, 1885, was in total 184. On March 1, 1886, the membership was 237, showing an increase of 53 in one year.

The following report of the secretary, Lawrence Mendenhall, a carefully prepared recapitulation of the work of the Exchange, and embracing valuable data and a complete history of the progress made during the past year, was received with much deserved favor.

CINCINNATI, February 27, 1886.

To the Board of Directors and Members of Builders' Exchange:

GENTLEMEN,—In presenting my second annual report as secretary of the Builders' Exchange, it gives me pleasure to lay before you the following facts and figures:

On the 24th of January, 1886, we entered upon the eighth year of our existence as a mercantile body, under conditions so favorable and prosperous as to dispel all doubts for our future success, and to cause us to be recognized as an influential body among our sister exchanges.

I will review the past briefly by stating that from a membership of 59 firms in 1882 we have increased in numbers to 257 firms to date, and have on hand a balance in the treasury of \$1,171.46, as shown by the report of the Treasurer, which showing speaks well for the management of every department of our association.

I am happy to say that this pleasant state of things is due not only to the interest manifested by the board, but also to the earnest coöperation of every member of the Exchange.

For the first time, since the organization of this body, has it felt qualified to render pecuniary support to our Industrial Exposition.

The membership at the end of last year was 184 firms, while the actual active membership this year is 217 firms.

During the year, we have admitted 74 firms; honorary members, 15; dropped or resigned, 13 firms; loss by death, 2 firms; expelled, 1 firm, leaving the number above stated.

The actual number of deaths of members is 5, and the names of those whose death has taken from us are: Benjamin Tappin, Luther Carpenter, S. A. Shafer, T. Frank Baker, Richard Witt. Their kindly genial faces will long be remembered by each member of the Exchange, and the "Memorial Record" just completed will ever bear witness to the esteem in which they were held by their associates.

The Exchange has held 50 meetings, the meetings of the Board of Directors numbering 29.

In addition to these, there have been held several committee meetings, every one important to the welfare of the Exchange, its members and building interests in general.

The Committee on Arbitration has had four cases submitted to it for adjustment, and with one exception, its decisions have given satisfaction and been complied with.

During the year there have been appointed committees upon the following, namely, registry law, centennial celebration, building laws, mercantile rules for the exchange and glossary of building terms. With the exception of the last two named, each committee has completed its labors.

Although appointed last year the Committee on Revision of Constitution finished its work this year.

The matter of "Mercantile Rules" I consider exceedingly important to our welfare, and I trust that soon this matter may receive careful attention.

The Exchange made a grand stride forward when it prepared a new code of building laws, in which our city was sadly deficient. It has been carefully prepared, and affords protection alike to contractor and owner, rendering the erection of unsafe buildings, fire-traps, etc., a thing of the past. These laws have attracted great attention all over the country.

The code is now in the hands of the Hamilton county delegation who will lose no time in presenting it in the legislature; and when it becomes a law, it behooves our members to give it unwavering support, thus rendering its enforcement easy.

The prosperity of any body, mercantile or otherwise, depends largely upon the hearty support of its members. With increased interest and energy upon our part, this Exchange may be known as an organization whose influence is felt throughout the entire country.

Already the eyes of sister cities are turning toward us, and upon us rests the responsibility of making this exchange what it should be.

Thanking the officers and members for their uniform courtesy and kindness to me during the past year,

I am yours respectfully,

LAWRENCE MENDENHALL, Secretary.

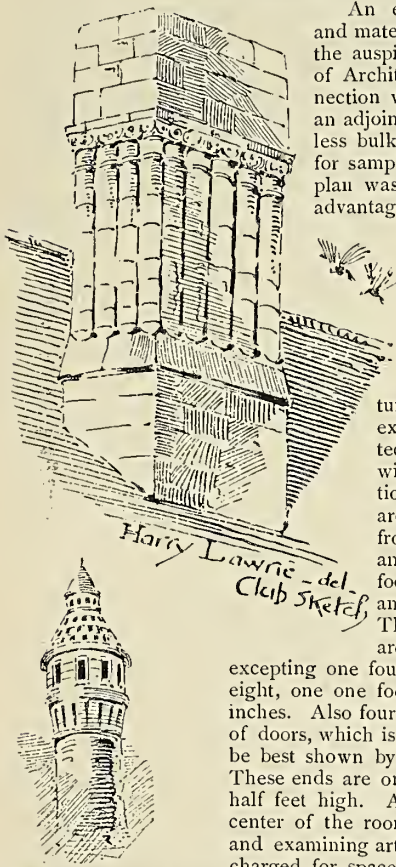
At the meeting of the new board of directors, T. E. Livezey was elected secretary, and J. Milton Clair, treasurer.

Mr. William A. Megrue, the newly-elected president, is probably as well known to a large circle as any business man in Cincinnati. Mr. Megrue is regarded as one of the largest contractors in the state, and is also at this time president of the Contracting Builders' Association. He is the first member who has been elected president of the Builders' Exchange for the second term, which is a sufficient evidence of his popularity.

W. B. LORD, who has been connected with the permanent exhibit of building material at Chicago since its inception, and previous to this had a large experience in building specialties, has taken the general Western agency of the Fox Hill granite, a true syenite from Chester county Pennsylvania, with headquarters at 24 old Chamber of Commerce building, corner Washington and La Salle streets. Mr. Lord is also agent for Pennsylvania green serpentine (except for Chicago), handles Virginia, Vermont and Pennsylvania slates, and represents the Royal Reversible Sash Co. Mr. Lord is especially qualified to handle stone, as he has given the geological formation of different sections careful study and his opinion as an expert is exceptionally valuable.

Association Notes.

KANSAS CITY SOCIETY OF ARCHITECTS.



An exhibit of building appliances and materials has been established under the auspices of the Kansas City Society of Architects. The society has, in connection with its meeting room, fitted up an adjoining room for the display of the less bulky appliances for buildings and for samples of building materials. This plan was thought by the society to be advantageous to all parties, first, for the reason that its members have not the facilities in their respective offices for showing to advantage the articles which are from time to time sent them for their examination and approval; and second, it relieves manufacturers and their agents from the expense of furnishing each architect a sample of the article they wish to introduce. The exhibition room has shelving arranged around the outside walls, and from floor to top of same is six and a half feet. Shelves are one foot wide, and are adjustable to any height of space required.

The standards or vertical divisions are two and a half feet apart, excepting one four feet two inches, one one foot eight, one one foot ten, and one two feet two inches. Also four return ends of shelving at sides of doors, which is intended for articles which can be best shown by hanging on a vertical surface. These ends are one foot wide and six and one-half feet high. A large table is placed in the center of the room for convenience of handling and examining articles on exhibition. The price charged for space is merely nominal, and barely sufficient to cover the expenses. The most desirable space, from a point two and a half feet above floor to the top shelf, is \$1.25 per square foot. All space below the above-named, 75 cents per square foot. The top shelf is intended for larger articles which do not require handling or close inspection, and the price for this shelf is \$2 per lineal foot, which includes all the vertical space between top shelf and the ceiling of the room, which is about seven feet above top shelf. The rooms are located in the center of the business portion of the city, and there are three architectural firms in the same building. The offices of a majority of the members of the society are within two blocks of the exhibition and meeting rooms. A large portion of the space has already been engaged by local firms.

CHICAGO BUILDERS' AND TRADERS' EXCHANGE.

At a meeting of the Exchange on the 9th instant, the following motion was offered by Joseph Downey:

WHEREAS, It is the common interest of all members to encourage and support every measure calculated to make the Builders and Traders Exchange the permanent headquarters and meeting place of all interested in building, whether permanently as architects, contractors or materialmen, or temporarily as those who contemplate the erection of building improvements, and

WHEREAS, The establishment of an Exhibit of Building Material in connection with and by the Builders' and Traders' Exchange, is one of its purposes and conducive to the best interests of its members, now therefore be it

Resolved, That the Board of Directors and Executive Officers be and they are hereby instructed to establish such exhibit of Building Materials as soon as practicable.

Through an apparent misunderstanding of the purposes of the motion, a motion to table was carried by a vote of 54 to 48.

CHICAGO ARCHITECTURAL SKETCH CLUB.

At the meeting of the club on the 15th instant, about thirty members were present. President Laurie occupied the chair. The mantel competition for prizes offered for the three best designs by the Chicago Anderson Pressed Brick Company, was announced closed, and as a committee of three architects was required to adjudicate upon the drawings,

R. C. McLean made the following motion, seconded by F. L. Lively:

Resolved, That a committee of three architects, consisting of Architects John W. Root, Louis H. Sullivan and W. L. B. Jenney, be asked to act as judges upon the mantel competition, and all future competitions of the club during the current year.

After some discussion by several members, the motion was carried.

The remainder of the evening was occupied by Mr. Irving K. Pond in an excellent paper on Polychromatic Ornament, which will be published entire, with a sheet of illustrative drawings, in the April regular edition.

In the discussion which followed Mr. Pond's article, it was stated by Mr. Lord that nineteen different clays could be procured, thirteen from the neighborhood of Nashville, Tennessee, alone. The qualities and proper combinations of brick and stone were generally discussed, and valuable and entertaining experiences were related by the many members who spoke.

NATIONAL ENGINEERS.

The Executive Board of the Temporary Civil Engineers' Committee on National Public Works send the following circular, addressed to the civil engineers of the United States:

CLEVELAND, Ohio, March 6, 1886.

To the Members of the Civil Engineers' Committee on National Public Works:

The Executive Board hereby calls a convention of the temporary Civil Engineers' Committee on National Public Works, to be held in Cleveland, Ohio, March 31, 1886. The purpose of this convention is to close up the work of the temporary organization,

with a view to the permanent organization which is to be formed on the following day, or April 1. It is expected that the entire session will continue for not less than three days, or until the character and policy of the permanent organization is fully and satisfactorily defined.

It is very desirable that in the initial or formative stages of a movement of so much moment to the public welfare and to the engineering profession, that every organization of engineers in the country should be represented.

It is likewise desirable that every delegate should be fully informed of the sentiments of the society which he represents, and familiar with the mature thought of its members.

The Executive Board fully appreciates the fact that the whole question is a matter for the most grave and deliberate consideration. It is fully persuaded by past experience that a disinterested comparison of views will result in a wise and unanimous conclusion; systems rather than men are at fault.

The Executive Board also realizes that the problem involves broad questions of public policy, on which there may be such differences as may take time to determine. It is, therefore, persuaded that the foundations of an organization should be carefully based, with a view to more than temporary existence.

Societies are therefore urged to send delegates, as requested by the December convention. Those societies which may not wish to appoint permanent delegates at this time can send provisional delegates, who will be entitled to all the privileges of the floor except that of voting.

The main topics for consideration at this convention will be: constitution and by-laws, ways and means, action of the convention. The Executive Board must congratulate all interested in the movement on the spontaneous response to the action of the convention of December 5, 1885. It would seem as if the sentiment of those best informed only needed a nucleus about which to crystallize. Already twenty-two societies, with a membership of some 2,600, have in some manner responded favorably, and it is but a matter of time when all will be included. Until, however, the movement is deeply grounded and thoroughly organized, it is not thought wise to make special effort for general public coöperation, though many public men have already exhibited a gratifying interest.

The Board has felt called upon to act beyond anticipation, and pending the convention will neglect no opportunity to promote the general cause. It hopes that provisional or doubtful questions may so far determine themselves as to make clear a definite policy for the future.

Delegates are expected to send their credentials to the secretary at the earliest possible date. A programme with full information will be issued at a later date.

L. E. COOLEY, President,

E. L. CORTHELL,

J. B. DAVIS,

JOHN EISENMANN,

AUGUSTUS KURTH,

The Executive Board.

WM. T. BLUNT, secretary, 44 Euclid Ave., Cleveland, Ohio.

In furtherance of the above the secretary is directed to add: All delegates from societies are expected to send at once their credentials, in the form of a transcript of the proceedings by which they were appointed in society or committee meeting, or both, signed by the authorized officers. All members of the profession interested in the subject are heartily invited to be present, and give the committee the benefit of their views. The technical press throughout the country is invited to be represented. Arrangements have been made whereby all attending the convention will be accommodated at "The Hollenden" at the reduced rate of \$2.50 per day. Rooms may be obtained by addressing C. D. Collins, clerk, "The Hollenden." The Executive Board will probably meet immediately before the convention to formulate its final report to the temporary committee.

All persons expecting to be present will please notify the secretary at once, and address all communications to
WM. T. BLUNT, Secy. Ex. Bd.,
44 Euclid Ave., Cleveland, Ohio.

This meeting is of the utmost importance to the engineering profession, and a full response should be made to this call.

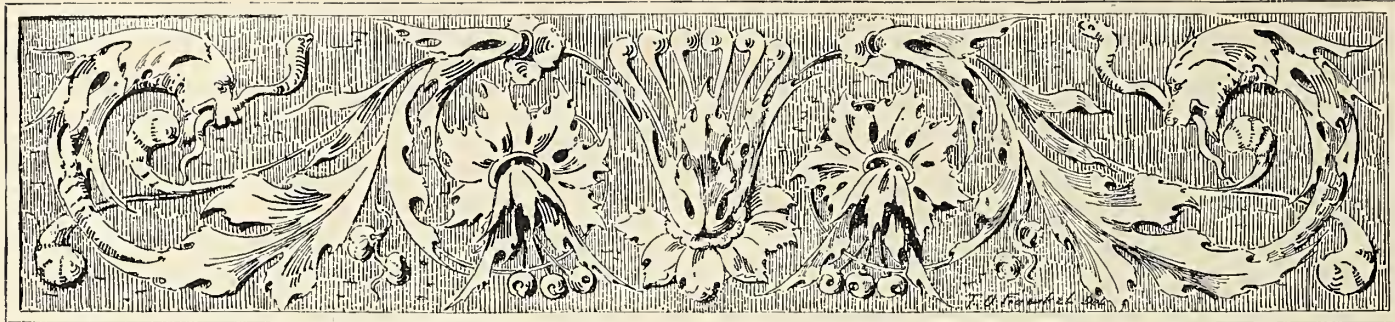
Mosaics.

THE Canadian Pacific Railway are about to erect a new bridge across the St. Lawrence river just west of Montreal. The bridge will be upon the cantilever principle with six solid stone piers supporting it. The foundations are laid, and the work is to be completed by December next, cost about \$2,500,000.

ARCHITECTS F. O. Weary and Geo. W. Kramer, of Akron, Ohio, are losers to the amount of about \$4,000 by fire. Their office was adjoining the large mills recently burned and very little of their effects was saved, their entire accumulation of drawings, library, etc., being destroyed. A notable loss is a large collection of catalogues which they regret. Material dealers should see that they have the foundation of another collection immediately.

H. T. SCHLADERMUNDT, whose pen and ink and other drawings are well known and attracted considerable comment of an exceedingly complimentary nature at the late exhibition of the Salmagundi Club, has located in Chicago at 612 Royal Insurance building, and his exceptional talent in architectural coloring, pen and ink drawings, and interior and decorative sketches, is at the service of architects. Mr. Schladermundt's talent as an architectural designer is of a high order, and his effort to establish himself here should receive the hearty coöperation, approval and practical assistance of the profession not only in Chicago but throughout the West.

BAKEWELL & MULLINS, the well known cornice and sheet metal ornament manufacturers of Salem, Ohio, suffered a severe loss by the destruction by fire of their warehouse and stamping room. The buildings were frame, and located about forty feet north of the main building. Besides a great deal of valuable machinery, they contained many very expensive dies and plaster casts of architectural sheet-metal ornaments and statuary, which can only be replaced at great expense. There was also stored in the warehouse a large amount of ordered cornice and ornament work ready to ship, and also much in stock, of that kind that is continually in demand about large public and private structures. The estimated loss is fully \$50,000. Insurance carried on entire works and stock, \$40,000. Will receive on the property destroyed \$25,000. The main building, an extensive two-story brick and covering a large tract of ground, escaped with a slight scorching on the northwest corner. In consequence, the firm will be able to go to manufacturing again in a comparatively few days. They will dispense with their foundry work, and turn their large foundry department into stamping rooms. The firm have now about \$40,000 of contracts on hand; and have already ordered new and improved machinery to take the place of that destroyed. The cornice department proper was but little injured. At the time of the fire they had an unusual amount of ornament work, sold and in stock, stored in the warerooms. Their new buildings will be solid, permanent structures, and as nearly as possible fire-proof, and larger than the old ones. The well known energy of the firm will push business along at but a slightly retarded speed, and their hundreds of old customers, and scores of new ones obtained every week and month, will be but little if any delayed or inconvenienced by the occurrence of the fire.



Synopsis of Building News.

Billings, Mont.—Architect Emmet Anthony, of Denver, Col., reports: For Stebbins, Mund & Co., two-story store and bank building, 50 by 112 feet, stone front; cost \$35,000; nearly finished; Nelson & Gognon, builders.

Birmingham, Iowa.—Architect Edward Clark, of Ottumwa, Iowa, reports: For Nelson Gloffely, two-story frame dwelling, 30 by 50 feet; cost \$2,400; under way.

Cedar Rapids, Iowa.—Architects Josselyn & Taylor, report: For John Thomas, residence, 48 by 56 feet; cost \$10,000; preparing plans; contracts not let.

Cheyenne, Wyo.—Architect Emmet Anthony, of Denver, Col., reports: For J. W. Collins, two-story brick store and bank building, 44 by 102 feet; cost \$20,000; nearly finished; G. R. Hurd, builder.

Chicago, Ill.—Architects Burling & Whitehouse have let the contract for the erection of the Grant Monument to the Hallowell and Bodwell Granite Companies for \$30,000. It will be built entirely of Fox Island (Maine) granite, and be completed by September of this year. No stone will be visible except granite.

Architects J. M. Van Osdel & Co. report: For Henry Memory, six-story and basement, extension 103 by 101 feet to the Memory Building, to cost \$125,000; plans under way.

Architect W. L. Carroll reports: For Wm. McAllister, two-story and attic and basement residence, corner of Forty-seventh street, frame, with brownstone basement; cost \$12,000; also barn; M. Dumper, carpenter; Barney & Rodatz, masons.

Architect Clinton J. Warren, formerly with Burnham & Root, reports: For L. J. McCormick, remodeling block on corner of Lake and Wabash avenue; fitting up for desirable offices, with modern improvements; a first-class hydraulic elevator, with convenient entrance on street level, will be put into the building; work is under way; cost not estimated. Mr. Warren is also the architect of the Chicago, Burlington Railroad, and reports that he has under way a number of depots, round-houses, etc., along the line of the road. For John Leslie, two-story and basement and attic residence, pressed brick front, Arabian stone basement; cost \$10,000; under way. For J. C. Buckbee, two-story and attic and basement residence, same materials as above; cost \$7,000. For G. W. Lyon, two-story and basement and attic frame residence in Kenwood; cost \$10,000; plans under way.

Architect Geo. Beaumont reports: For Mrs. M. Kleiner, two-story store and flats, 21-6 by 72 feet, at 108 Thirty-ninth street, Indiana pressed brick, with stone trimmings; cost \$5,000. For D. H. Dickinson, one-story wood and iron warehouse, 136 by 115 feet, on North Pier; cost \$8,000.

Architect C. L. Stiles reports: Mr. O'Brien, two-story residence, 24 by 62 feet, on Congress near Ashland avenue, pressed brick front, stone trimming; cost \$6,500; contracts not let; also, preparing plans for three three-story tenements, 60 by 72 feet, pressed brick and stone; cost \$10,000.

Architect J. J. Flanders has made plans for additions to the Beidler manufacturing building on West Washington street, to cost \$50,000.

Architects Burnham & Root have prepared plans for a residence for J. H. Pearson, to be erected at 500 West Jackson street; cost \$17,000.

Architect L. G. Quackenboss reports: For L. C. Riggs, residence at 866 West Monroe street; cost \$17,000; under way.

Architect H. Copeland is about to erect a store and flat building for himself on Ogden avenue; cost \$16,000.

Architect Alfred Smith reports: For A. J. Snell, three-story and basement, brick, stone and terra-cotta store and flat building; it will be erected at once on the triangular lot corner of West Lake street and Bryan place, having a frontage of 250 feet on Lake street and 210 feet on Bryan place facing Union park; the building will contain nine stores and thirty-three flats; cost between \$90,000 and \$100,000. For James D. Marshall, three three-story and basement, rough-faced stone-front houses, 54-8 by 67 feet on Laffin street between Adams & Jackson streets; cost \$22,000. For H. Ahrens, a granite vault at Graceland cemetery; cost \$4,500; making plans. For Mr. Bogle, three-story and basement store and flat, building 120 by 20 feet, corner of Van Buren and Hoyne avenue; brick and stone; cost \$9,000.

Architect W. W. Boyington has plans for a two-story, basement and attic chapel building, 68 by 115 feet, at Evanston, Ill., for the Garrett Biblical Institute; the first floor contains library, two lecture rooms, professors' rooms, reading, pamphlet and assistants' rooms, fire-proof vaults, and large central hall and staircase; the second floor contains the chapel with seating for 400, three lecture rooms and professors' rooms; the basement will be occupied by the gymnasium, baths and janitor's apartments; the walls will be of pressed brick with terra-cotta and brownstone trimmings; the interior finish will be in hardwoods; slate roof; cost about \$30,000.

Cincinnati, Ohio.—The following is reported by Lawrence Mendenhall: Everything still looks bright, and all the architects are busy. If all the structures for which plans are drawn are built, next season will be Cincinnati's big season, in fact, the largest for years.

Architect Geo. W. Rapp, reports: For Daniels & Coombe, four-story stone front store building, 22 by 100 feet; cost \$9,000. For Mrs. P. Britt, five-story stone front store building, 26 by 100 feet; cost \$12,000.

Architect H. E. Siter has prepared plans for a handsome large bank and office building to be located on the southeast corner of Third and Walnut streets. The lot has a frontage on Third of 100 by a depth along Walnut street of 85 feet, and is the joint property of the Citizens' National Bank and Messrs. Paxton & Warrington. The building will be six stories high in front and seven stories in the rear. The outer walls will be of Zanesville pressed brick, with salmon-colored Mansfield stone trimmings, enriched with terra-cotta ornaments. The style of architecture in so far as it can be made consistent with plenty of light (an important feature in this smoky city), is Romanesque, and the building, when completed, will present a very attractive appearance. The external features of the building lie principally in the roof treatment, which embodies a clear story, with heavy gables and round tower on the corner, the steep roof background being covered with red slate, and the massive entrance on Third street, which gives an appearance of great strength and security. The staircase is to be constructed wholly of iron, and the main hallway will be fireproof throughout as will be also the banking office, to be occupied by the Citizens' National Bank. The upper floors will be divided into offices to suit tenants. The building will be supplied by two hydraulic elevators and will be heated by steam, bids for which have not as yet been invited, but will be at a future date. For Second National Bank, four-story brick bank and office building, 40 by 130 feet, walls to be of stock brick laid with red mortar, with Mansfield stone trimmings and ornamental brick panels; plans completed.

Architect Samuel Hanniford has completed plans for the large new Derby building to be erected on the corner of Fourth and Central avenues during the coming season, and bids are now being taken on same at his office. This building will be erected on a T-shaped lot, fronting 50 feet on Fourth street by an extreme depth of 126½ feet, being 110 feet wide in the rear, and having a frontage of 26½ feet on Central avenue. The building will be finished as one large store, suitable for wholesale purposes, but is so arranged that it can readily be converted into three stores, if desired. It will be six stories on each street. Outside walls of pressed brick, and every care taken to secure good light. Also preparing plans for the new Alms & Doepeke buildings on the southeast corner of Main and Hunt streets, which will consist of a seven-story addition, 64 by 85 feet, corresponding in style and finish with the present building; and also, a six-story brick warehouse on the 50-foot lot on the north side of Hunt street, opposite the rear end of their present store, with which it will connect by covered bridge crossing the street. The new building will contain three elevators.

Clarksburg, W. Va.—Building outlook for the immediate future is not very encouraging. An opera house is talked of, also a hotel building.

Architect C. L. Hickman has been appointed superintendent of the new post-office and court house building, to cost from \$50,000 to \$75,000. Bids have not yet been called for. Mr. Hickman also reports a residence under way, which is to cost about \$15,000. Col. G. W. Bunting, of Indianapolis, Ind., is the architect of the Harrison County Court House, to be erected in Clarksburg. It is to be a two-story and basement brick and stone building, 65 by 120 feet, slate roof; cost \$50,000; now advertising for bids.

Coldwater, Mich.—Building is dull at present. It is thought a large amount of farm building will be done in this section; but city work will be scarce unless the citizens of the county vote for a new court house. This matter is now being agitated.

Architect M. H. Parker is preparing plans for a public library building, to be erected out of money donated for that purpose by Edwin R. Clarke. The building will be two stories and basement high, 66 by 75 feet, basement of stone above that, brick with stone and galvanized iron trimmings; estimated cost \$12,000.

Delhi, Ohio.—Architects Smith & Forbush, of Cincinnati, Ohio, reports: For S. D. Patterson, eight-room frame residence, shingle roof.

Denver, Colo.—Outlook for building is not very flattering.

Architect Emmet Anthony reports: For B. & A. Hughes, brick and stone block of stores, 60 by 80 feet, with opera house above; cost \$15,000; nearly finished; A. J. Kelley, builder. For St. Mark's Episcopal Church, brick chapel, 30 by 65 feet, iron roof; cost \$7,000; nearly finished; Hallack & Howard, builders.

Des Moines, Iowa.—The present outlook is good, and a big building season is expected.

Architect J. S. Blake reports: For J. A. Willson, three-story brick building, 44 by 70 feet; pressed brick front, with stone trimmings; cost \$9,000; projected. For N. L. Goldstone, five-story hotel building, 75 by 126 feet; cut stone front; estimated cost, \$40,000; projected. For John Willson, frame dwelling, 28 by 50 feet; cost \$3,000; J. A. Carlson, builder. For Dr. H. C. Paige, improvements, etc.; cost \$1,800; projected.

Dubuque, Iowa.—Architect F. D. Hyde reports: For Visitation Academy, three-story brick building, 80 by 50 feet; slate roof; estimated cost \$10,000; plans under way.

Elgin, Ill.—Architect C. L. Stiles, of Chicago, reports: For city of Elgin, boulevard school building, 64 by 70 feet, two stories, brick, with stone trimmings; steam heating; cost \$12,000; contracts let. Contracts for the Mill street school, to cost \$12,000, have been let, Turnbull Bros., carpenters; Marckoff Bros., masons. For A. B. Church, two-story stone-front store building, 27 by 70 feet; cost \$7,000. Also for Mr. Church, a nine-room brick residence; cost \$8,000; contracts not let.

Fairfield, Ill.—Architects Des Jardins & Hayward, of Cincinnati, Ohio, report: For Fairfield Collegiate Inst., brick college building, 50 by 70 feet; cost \$9,000.

Fort Wayne, Ind.—Building business is at present quite brisk, and it is predicted that more building will be done this season than any previous year.

Architect H. W. Matson reports: For A. Becker, two-story brick building, 30 by 52 feet; slate roof; cost \$4,000; Frederick Bundt, builder. For R. Zoeler, two-story brick store building, 25 by 87 feet; cost \$4,000; contract not let. For Wm. H. Dreier, two-story brick residence; slate roof; terra-cotta and stone trimmings; 40 by 62 feet; cost about \$6,000; taking figures. For C. K. Fairfield, two-story brick, 28 by 42 feet; slate roof; cost \$2,000. Other small houses, amounting to total cost of \$5,000. All the above will be commenced soon as weather permits. Mr. Matson has also a two-story brick parsonage under way for Rev. Gotsch, in Madison township; cost \$2,400.

Greeley, Colo.—Architect Emmet Anthony, of Denver, Colorado, reports: For Hunter & West, three-story store and bank building, 118 by 120 feet; cost \$60,000; inclosed; G. B. Wyman, builder.

Kansas City, Mo.—Architects W. W. Polk & Son report the following work for the month of February: For J. H. Hittshaw, two-story six-room frame Queen Anne cottage; cost \$3,000; under way. For Benj. Estill, row of six two-story and basement brick dwellings; cost \$9,000; plans on the boards. For J. C. Nettleton, two-story and basement double brick dwelling, ten rooms each; cost \$8,000; plans completed. For R. G. Estill, row of five two-story brick stores; cost about \$7,000; foundations commenced. For Henry Lebrecht, two-story brick store; cut stone front, tiled floor; also stable; cost about \$5,000; taking figures. For B. Leibstadter, double brick dwelling; two stories, basement and cellar; estimated cost \$7,500; preliminary sketches on the boards. For Benj. Estill, row of eight two-story, basement and cellar brick dwellings; estimated cost \$15,000; plans completed.

La Harpe, Ill.—Building matters rather quiet. Too early to make predictions for the season.

Architect W. L. Ross reports: For the Masonic Fraternity, two-story store and hall building, 63 by 30 feet, tin roof, galvanized iron cornice; cost \$2,200; plans under way.

Marion, Va.—Mr. M. T. Lewman, contractor and builder, of Greencastle, Ind., reports: Insane Asylum and outbuildings, etc.; cost \$165,000; under way; Lewman & Sweeney, contractors.

Marshalltown, Iowa.—Building matters are at present very quiet, with little prospect of improvement.

Architect J. G. Weatherby reports: For R. E. Sears, two-story brick armory building, 50 by 100 feet, for Co. D, 1st regiment I. N. G.; cost \$7,000; making sketches. For Mrs. J. E. Hazen, frame cottage, 32 by 44 feet; cost \$2,000; plans under way; contract not let.

Architect F. M. Ellis reports: For W. A. Wass, two-story brick and stone dwelling, 34 by 46 feet, redwood roof; cost \$3,500; foundation in. For Attorney Smith, remodeling two-story frame dwelling, 31 by 43 feet; cost \$2,000.

Minneapolis, Minn.—Architect I. W. Kelley reports: For Ole Thingstad, block of two three-story stores; cost \$15,000.

The Minneapolis Exposition directors are to send a committee to New Orleans to buy material for the fitting and furnishing of the Exposition building to be erected in this city. It is intended to begin excavation for the building within three weeks.

Mobile, Ala.—Architect James H. Hutchinson reports: For John L. Laveretta, two-story brick, slate roof, galvanized iron cornice, 109 by 57 feet; cost \$16,000; under way; Wm. O. Pond & Son and Rosette & Fincher, contractors. For Mrs. I. H. Emanuel, three two-story brick buildings, 80 by 100 feet, slate roof, galvanized iron cornice; cost \$20,000; under way; W. S. Foster and Chas. Farley, builders.

Montgomery, Ala.—Architect Mason Maury, of Louisville, Ky., reports: For F. H. Warren, frame dwelling, 42 by 60 feet; cost \$4,300; taking bids.

Mt. Sterling, Ky.—Architects Des Jardins & Hayward, of Cincinnati, Ohio, report: For A. Hoffman, frame dwelling 40 by 60 feet; cost \$5,000.

New Hampton, Iowa.—A. M. Radcliff, of St. Paul, Minn., is the architect, and L. Brown & Sons, superintendents of the Congregational church building, 38 by 58 feet; cost \$3,500; basement completed.

A two-story and basement brick hotel building, 40 by 50 feet, has been completed. Additions to Catholic church and bell tower; cost \$1,500.

New Haven, Ind.—Architect H. W. Matson, of Fort Wayne, Ind., reports: Two-story, four room brick school house, 48 by 58 feet, slate roof; cost \$5,000; projected; to be commenced as soon as weather permits.

North Springfield, Mo.—Outlook good.

Architect S. B. Abbott, reports: For Bank of Springfield, bank building, 24 by 100 feet, cut-stone front with marble columns; side, pressed brick with cutstone trimmings, plate glass windows, galvanized iron cornice, gravel roof, steam heat, cherry finish, soap stone finish for inside walls; cost \$10,000; under way.

Owensboro, Ky.—Architect Mason Maury, of Louisville, Ky., reports: Frame dwelling, 40 by 50 feet; cost \$3,200.

Painesville, Ohio.—Architect C. H. Owsley, of Youngstown, Ohio, reports: Two-story, six-room brick school house, with stone and terra-cotta trimmings, heating by Rutan system; cost \$15,000; contract not let.

Pleasant Ridge, Ohio.—Architects Smith & Forbush, of Cincinnati, Ohio, report: For town hall and Masonic lodge, two-story brick building, 36 by 70 feet; slate roof.

Racine, Wis.—A special election was held on the 16th inst., to decide whether Racine shall have a water works or not. It was carried by a majority of 3,058, 94 votes being cast in the negative.

Richmond, Ky.—Architects DesJardins & Hayward, of Cincinnati, Ohio, report: For W. W. Watts, fine brick and stone residence, 70 by 90 feet; cost \$30,000.

River Falls, Wis.—Architect E. Strassberger, of St. Paul, Minnesota, reports: For Frank Russell, two-story brick and stone store building, 100 by 75 feet; cost \$15,000.

Salt Lake City, Utah.—The appropriation bill now before the legislature contains an item of \$30,000 for a reform school.

Aaron Keyson is erecting a two-story brick warehouse, 65 by 100 feet; cost \$15,000; foundation being laid; E. Morris, builder; no architect employed.

Sioux City, Iowa.—Outlook for spring season is very good.

Architect G. G. Baldwin, reports: For Wise Brothers, four brick tenements, 76 by 51 feet, tin roof; cost \$7,000; projected.

For W. H. Livingston, two brick tenements, 50 by 60 feet; cost \$8,000; projected.

For Frank Clark, builder. For N. Desparois, three-story brick block of stores, 50 by 120 feet; cost \$18,000; under way.

For James Wall, builder. For Schulteis Bros., three-story brick block of stores, 42 by 80 feet; cost \$15,000; under way.

For Joseph Sulzbak, builder. For J. Holdenrod, three-story brick store building, 25 by 80 feet; cost \$5,000; under way.

For Joseph Sulzbak, builder. For Garretson & Co., four-story hotel building, 70 by 150 feet; cost \$90,000; projected.

For F. T. Evans, at Buffalo Gap, two-story brick store building, 100 by 60 feet, tin roof; cost \$14,000; under way.

St. Louis, Mo.—Architects Ramsey & Swasey, report: For Ellis Wainwright, flat building, 66 by 78 feet, four flats of six rooms each, with modern improvements, New York plan, pressed brick and brown stone front; cost \$20,000; contracts just let.

For same gentleman, fourteen-room, pressed brick and brown stone residence, 88 by 27 feet, Eastlake design, with hardwood effects inside.

For Edward Mallinckrodt, factory building 80 by 300 feet, and improvements on old buildings; cost \$20,000; drawings under way.

For George B. Young, ten-room, Queen Anne, pressed brick and brown stone residence, 31 by 65 feet; cost \$9,000; under way; contract sub-let.

Of the building permits issued recently, the following call for an expenditure of \$4,000 or over: M. B. Scanlon, two-story brick dwelling, 33 by 54 feet; cost \$4,500; M. B. Scanlon, builder. F. Yaeger, three-story brick dwelling, 25 by 59 feet; cost \$5,100; J. Helm, builder. Jansen & Lake, three, two-story brick dwellings, 49 by 52 feet; cost \$5,800; Goesse & Remmers, builders. J. V. Reyburn, five-story brick store building, 23 by 104 feet; cost \$12,000; Goesse & Remmers, builders. M. Schaller, three two-story brick dwellings, 49 by 65 feet; cost \$7,000; W. Klute, builder. W. Hegel, five-story brick store building, 23 by 90 feet; cost \$20,000; W. J. Hegel, builder. D. W. Temmie, two two-story brick dwellings, 41 by 58 feet; cost \$6,500; P. Folck, builder. B. Loeblein, two-story brick dwelling, 50 by 73 feet; cost \$10,000; P. Riechers, builder. F. W. Barkhoefer, two two-story brick dwellings, 41 by 60 feet; cost \$6,500; W. H. Rocklage, builder. J. L. Applegate, two-story brick dwelling, 29 by 50 feet; cost \$6,000; H. E. Roach, builder. T. H. Torrence, five two-story brick dwellings, 30 by 45 feet; cost \$10,000; contracts sub-let. T. Foley, two two-story brick dwellings, 32 by 52 feet; cost \$5,000; T. Roach, builder. H. Stussel, two-story brick dwelling, 22 by 54 feet; cost \$4,000; H. Schildemann, builder. F. C. Pauly, four two-story brick dwellings, 60 by 52 feet; cost \$6,000; A. McAllister, builder. P. Thiele, three two-story brick dwellings, 50 by 61 feet; cost \$4,750; J. G. Hendricks, builder. Brinkwirth Brewing Co., three-story brick hall, 36 by 75 feet; cost \$15,000; H. Bruns, builder. Same company, two-story brick dwelling, 30 by 51 feet; cost \$5,000; H. Bruns, builder. J. H. Fanning, two-story brick dwelling, 31 by 42 feet; cost \$6,000; T. J. Kelly & Co., builders. J. G. Stucksted, two-story brick dwelling, 31 by 56 feet; cost \$4,000; B. Northoff, builder. J. S. Walsh, repairs to store front wall, 96 feet; cost \$4,000; J. Flannery & Co., builders. Mrs. Smidt, three three-story brick dwellings, 47 by 52 feet; cost \$7,500; Wm. Pane, builder. Same owner, four two-story brick dwellings, 50 by 35 feet; cost \$4,500; Wm. Paul, builder. J. D. Griswald, two-story brick dwelling, 25 by 81 feet; cost \$5,200; R. P. McClure, builder. Mrs. L. Lenz, three two-story brick dwellings, 58 by 47 feet; cost \$5,000; Wm. Gahl & Co., builders. C. Morshel, two-story brick dwelling, 46 by 59 feet; cost \$9,000; H. Wauschaffe, builder. J. Meinhardt, three-story brick dwelling, 25 by 50 feet; cost \$4,000; A. Uhri & Son, builders. G. H. Brueggemann, two-story brick dwelling, 43 by 65 feet; cost \$6,500; J. C. Brockmeyer, builder. P. & B. Pollack, two-story brick dwelling, 45 by 65 feet; cost \$9,200; A. Wagner, builder. G. Kaufold, three two-

story brick dwellings, 61 by 64 feet; cost \$10,000; Bothe & Ratterman, builders.

Wm. Rieove & Son, two two-story brick dwellings, 32 by 54 feet; cost \$5,000; Wm. Rieove & Son, builders.

W. Kennett, two two-story brick dwellings, 22 by 23 feet; cost \$5,000; Wm. Kirksick, builder.

H. H. Wipperman, three two-story brick dwellings, 50 by 48 feet; cost \$5,000; H. Schulte, builder.

Union Building Co., ten-story commercial bank and office building, 106 by 127 feet; cost \$500,000; Union Building Co., builders.

R. Sadring, three-story brick store and dwelling, 25 by 45 feet; cost \$4,000; A. J. Riddle, builder.

Abner Cooper, eight two and three story brick dwellings, 152 by 50 feet; cost \$20,000; Abner Cooper, builder.

Total number of permits issued from January 1 to February 26, 80; cost \$876,850.

St. Paul, Minn.—Architect A. M. Radcliff, reports: For P. R. L. Hardenbergh, two and one-half-story brick residence, 38 by 64 feet; cost \$20,000.

For St. Paul Improvement Co., seven-story brick business block, 60 by 90 feet, with elaborate cutstone front, to be erected on Sixth street, between Robert and Jackson streets; cost \$75,000.

Architect Geo. Laurent reports: For M. D. Shanley, five-story brick block, 50 by 70 feet, with cutstone front, to be erected in West St. Paul, at the end of Robert street bridge; cost \$15,000.

Architects Knight & Newhausen report: For J. M. Henasey, four-story brick hotel, 40 by 142 feet, to be erected on the corner of Rosabel and Broadway; cost \$28,000.

Architects Feltz & Joy, report: For Edward Langevin, seven-story brick block, 75 by 90 feet, corner of Sixth and Robert streets; cost \$100,000.

Architects Bergman & Fischer, report: For Hass & Statbell, three-story brick store and dwelling on St. Peter street; cost \$15,000.

Sturgis, Mich.—Outlook for the first part of the season is not very encouraging.

Architect J. M. Barrows reports: For Ausbrook & Sturgis, three-story brick building, 64 by 64 feet, for furniture factory, etc.; cost \$3,930; under way.

The architect is the builder. Also two smaller and less important buildings under way.

Traverse City, Mich.—Present condition of building trade is dull.

Outlook not very encouraging.

Architect J. W. Hilton reports three small jobs just started; aggregate cost \$3,750.

Warren, Ohio.—Architect C. H. Owsley, of Youngstown, Ohio, reports: For H. M. Richards, of New York city, a frame residence to cost \$9,000; contract not let.

Washington, Ind.—Architects DesJardins & Hayward, of Cincinnati, Ohio, report: For the Wilson Coal Co., brick store building, 51 by 100 feet; cost \$18,000.

Winstead, McLeod Co., Minn.—Architects Bergman & Fischer, of St. Paul, Minn., report: For Rev. Elshorst, brick church, 56 by 100 feet; cost \$15,000.

Youngstown, Ohio.—Building outlook is not considered good.

Architect C. H. Owsley reports: For Thos. Davis, three-story brick building, 75 by 70 feet, stone and terra-cotta trimmings; cost \$19,000; contract not let.

Zanesville, Ohio.—Building season not yet opened.

Architect Henry C. Lindsay reports: For J. H. Dodd, double brick house, 34 by 52 feet; cost \$4,000; under way.

Robert Price, builder.

For David Goodman, two-story store and dwelling, 20 by 60 feet; cost \$3,000; under way.

Dunzweiler & Co., builders.

For Edward Dillon, two-story frame cottage; cost \$2,800; projected.

For Daniel Morgan, two-story brick dwelling, 33 by 48 feet; cost \$2,000; Geo. M. Kerner builder.

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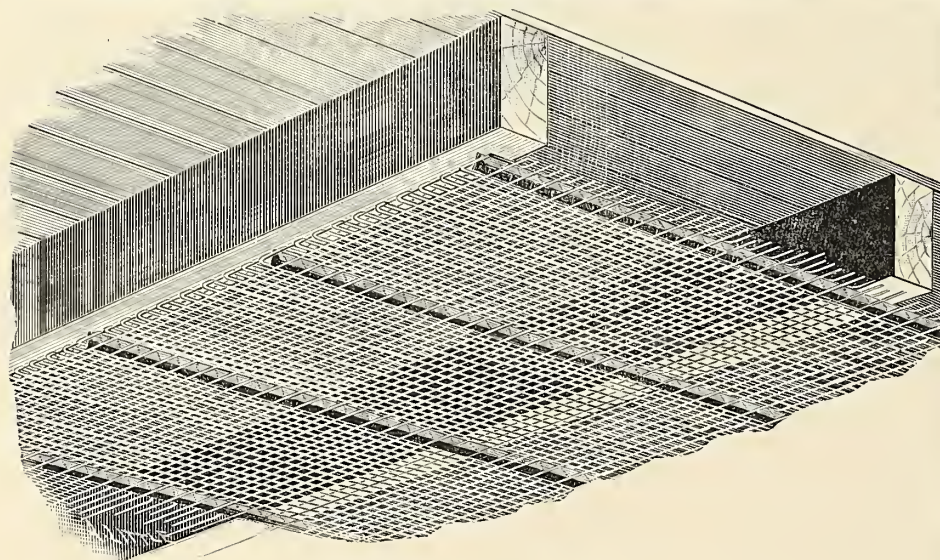
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PROPOSALS.

FOR COURT HOUSE.

OFFICE OF THE AUDITOR OF SCOTT CO., IOWA,
DAVENPORT, March 1, 1886. }

Sealed proposals for the erection of a Court House for
Scott County, Iowa, at Davenport, will be received at the
Auditor's office until 2 o'clock P.M., April 8, 1886.

Plans and specifications can be seen at the Auditor's
office, in Davenport, or at the office of J. C. Cochrane,
Architect, 78 Ashland Block, Chicago, after the 10th day of
March.

The Auditor or Architect will furnish bidders with printed
slips giving full instructions upon application.

(Signed)

I. H. SEARS,
HENRY RUWE,
W. B. MURRY,
L. ROGGE,
U. M. KELSEY,
Board of Supervisors.

C. C. CAMPBELL, County Auditor.

CONTRACTS LET.

SPRINGFIELD, ILL., March 17.

The state-house commissioners, after a two days' session,
have let the following contracts: For furnishing the state
law library with chairs, desks, etc., to J. A. Parkley; car-
peting, to John Bresmer; both of this city; for furnishing
elevator screens to Poulson & Eger, of New York, the firm
favored by the board with the contract to construct the
eight statues of living and dead men.

NOTICE TO CONTRACTORS.

Sealed proposals for the furnishing of materials and con-
struction of the State House of Correction and branch of the
State Prison in the Upper Peninsula, Michigan, at Mar-
quette, Michigan, under the act of the Legislature, No. 148,
public acts of 1886.

Sealed proposals are invited by the Board of Commissioners
appointed under said act No. 148 until Wednesday,
April 28, 1886, at 5 o'clock p. m.

Plans, specifications and instructions to bidders may be
seen on and after the 15th day of March, 1886, at the office
of the Board of Commissioners at Marquette, Mich., and at
the office of the architects, Wm. Scott & Co., Nos. 4 and 5
Wayne County Savings Bank building, Detroit, Mich.

Proposals must be submitted for the entire work, and the
Board of Commissioners reserve the right to accept such
proposals as they may deem for the best interests of the
State, or reject all.

Proposals are required to be submitted on the schedule
blanks and accompanied by a copy of instructions to bid-
ders, both of which, together with copies of the act, will be
furnished to intending bidders upon application to the
Secretary of the Board.

All bidders will be required to furnish bond and security,
or a certified check payable to the order of the Board of
Commissioners, equal in amount to 2½ per cent of the bid
submitted, which bond or certified check will be forfeited to
the Board of Commissioners in the event of the failure or
refusal of the bidder to enter into contract with the board
should his bid be accepted.

All proposals must be sealed, and indorsed, "Proposals
for State House of Correction and Branch of State Prison,
Upper Peninsula," and addressed to the Board of Commis-
sioners at Marquette, Mich.

For further information apply to the Secretary of the
Board at Marquette, Mich. E. P. ROYCE,
President of Board of Commissioners for State House of
Correction and Prison, Upper Peninsula.

Attest GEO. P. CUMMINGS, Secretary.
Marquette, Mich., February 27, 1886.

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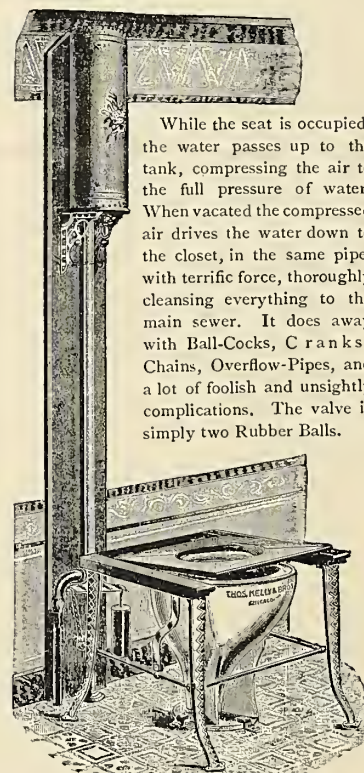


FIG. 3.
THOS. KELLY & BROS.,
75 Jackson street, Chicago.

PROPOSAL.

JAIL BUILDING.

[At Lexington, Ky.]

Sealed proposals will be received by the undersigned until
first day of April next for the building of a new jail for Lex-
ington county. The building to be of brick; the jail proper
to be of iron, or iron and steel. Plans of the building, and
anything connected therewith, may be seen by calling on
Mr. T. W. Kauffmann, secretary board, at Lexington court
house. Bids will be received for the building and jail work
separately, or the whole together. The commissioners re-
serve the right to reject any or all bids.

S. M. SIGHTLER,
J. J. DERRICK,
W. S. KEISLER,

County Commissioners, Lexington County.

THE INLAND ARCHITECT AND BUILDER.

Vol. VII.

No. 5

APRIL, 1886.

THE INLAND ARCHITECT AND BUILDER

A Monthly Journal (with an Intermediate News Number) Devoted to

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Construction, Decoration and Furnishing
IN THE WEST.

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L. MULLER, Jr., Manager. R. C. McLEAN, Managing Editor.
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STANDING COMMITTEES FOR 1886:

Committee on Discipline—The Board of Directors of the Western Association.

Committee on Raising the Standard of Professional Requirements for Membership—W. W. Boyington, W. L. B. Jenney and D. Adler, all of Chicago.

Committee on Uniform Contracts and Specifications—The executive boards of the several state associations to report at the next session of the Western Association.

Committee to take charge of the Bill Governing the Office of Super-vising Architect of the United States—D. Adler, Chicago; D. H. Burnham, Chicago; J. F. Alexander, La Fayette, Ind.

Committee on Procuring Architectural Drawings and Photographs for Exhibition at the next Convention of the Western Association—The members of the Committee on Formation of State Associations.

Committee on Collection of Statistics on Competitions—C. E. Illsley, St. Louis, Mo.; Sidney Smith, Omaha, Neb.; E. H. Taylor, Des Moines, Iowa; G. W. Rapp, Cincinnati, Ohio; J. F. Alexander, La Fayette, Ind.

Committee to Represent the Western Association at the next Annual Convention of the American Institute—W. L. B. Jenney, Chicago, Ill.; J. F. Alexander, La Fayette, Ind.; W. F. Hackney, Des Moines, Iowa; Sidney Smith, Omaha, Neb.; J. G. Haskell, Topeka, Kas.

Committee on Statutory Revision—Dankmar Adler, Illinois, Chairman; Sidney Smith, Nebraska; I. Hodgson, Minnesota; J. F. Alexander, Indiana; C. H. Lee, Iowa; E. O. Fallis, Ohio; A. E. Cobby, Dakota; Chas. K. Ramsey, Missouri; J. S. Mathews, Wyoming; S. J. Osgood, Michigan; C. A. Curtain, Kentucky; E. Townsend Mix, Wisconsin.

Committee on Formation of State Associations—J. F. Alexander, La Fayette, Ind.; Chas. K. Ramsey, St. Louis, Mo.; E. H. Taylor, Des Moines, Iowa; I. Hodgson, Minneapolis, Minn.; H. P. McDonald, Louisville, Ky.; Geo. W. Rapp, Cincinnati, Ohio; D. M. Harteau, Green Bay, Wis.; Sidney Smith, Omaha, Neb.; W. H. Cusack, Nashville, Tenn.; T. Sully, New Orleans, La.; S. J. Osgood, Grand Rapids, Mich.; J. G. Haskell, Topeka, Kas.; S. A. J. Preston, Austin, Tex.; Mrs. Louise Bethune, Buffalo, N. Y.

FOUR months have passed since the last convention of the Western Association and the appointment of a committee representing each state to present the recommendations of the committee on statutory revision, in regard to a state law governing the architectural profession, to the legislatures of their several states. This committee, as far as we know, has as yet taken no steps toward carrying out this most important office, which should be done at once in every state where a legislature is now sitting. The necessities for legislative recognition of our profession becomes every day more important, and now when the bill in regard to government building is before congress the state enactments should keep pace with it. President Adler is prepared to supply copies of the bill and any information that is necessary, and we are anxious that this work shall progress as far as possible before the next meeting of the Western Association.

ANOTHER committee which, without a like friendly suggestion may let valuable time pass, is that appointed to procure architectural drawings and photographs for exhibition at the next convention of the Western Association. As this meeting will take place at Chicago and will be more fully attended than any that have preceded it, the work of this committee is of the utmost importance. The late exhibitions of architectural drawings at New York and Boston should stimulate every member of the profession to a supreme effort to eclipse, both in variety and in execution, any other exhibit. And this can be done if the members of the committees, ably seconded by each member of the profession, shall at once commence the work. State associations can assist by appointing sub-committees to act in concert with the members of the national, and each individual architect can make at least a partial selection of the work he will send to represent him in the exhibit. While the executive committee have not selected a hall for meeting, they are now looking for a suitable place where not only the large number expected to attend the convention, as well as visitors, may be accommodated, but such as will have galleries attached where an advantageous exhibit of the drawings may be made.

VERY important and promising result of the organization of permanent state associations of architects is that a nucleus is formed to which all professional new-comers naturally gravitate, particularly if the state association should be blessed with a wide-awake set of officers, and, most of all, a vigilant secretary, who makes it his rule that the association candle, so to speak, in his particular state shall not be hidden under a bushel, but held aloft where its beams shall radiate to every city, town and hamlet. In union is wisdom as well as strength, and it is important that every reputable member now in the state, or who comes hereafter, shall immediately find his place in the state association before he has in any way committed himself to any policy which might be inimical to the mutual interests of the profession there. Then each state association, with a very gratifying unanimity, adopts THE INLAND ARCHITECT as its official journal. This is gratifying, as testifying anew to the high and somewhat universal esteem which this journal no less enjoys than endeavors to merit; and it is gratifying *in futuro* to the association itself, since it provides a medium of publication for its own proceedings, which, without expense to the infant society, will at once give them the widest possible

circulation among western architects (beside a rapidly increasing number of eastern ones), and will place them in mutual communication with all the other state associations as well. Still more, it introduces each member in each state, metaphorically, to all his brethren in that and other states, and in its news columns, its illustrations, its editorials, its special contributions, and all its other departments, it places before him at each issue, items of intelligence, results of experience and observation, suggestions in planning, design and construction, and other matter bearing directly upon his professional work, which, in innumerable ways, will enlighten, encourage and stimulate to higher attainment and greater success.

AMERICAN civil engineers have long complained of the policy of the government in its unreasonable, and often pernicious, discrimination against themselves and in favor of West Point graduates, for appointments on government works, such as harbor and river improvements, and surveys and constructions, which belong to the domain of civil rather than of military engineering. West Point is primarily a military school, and civil engineering occupies a very subordinate place in its training. At the engineering schools, on the contrary, this science not only takes the first rank, but their students become the more proficient in it because no part of their attention is diverted to fortification, military drill, tactics, the history and science of war, and other military studies which dominate everything else about West Point. Therefore, at graduation the civil engineers are naturally more thoroughly qualified in their specialty than are the West Pointers, and, as the former usually engage at once in some civil engineering work, while the latter are as usually sent out on the plains or placed on garrison duty, where their experience is chiefly military, this superiority increases every year. But the policy of the government thus far has been to assume for West Point military graduates such a lofty superiority in every respect to their civil brethren, that the latter are either not recognized at all, or are employed only in a subordinate capacity under the ostensible direction of an army engineer, whose ignorant and conceited intervention sometimes proves a most serious embarrassment in the execution of the work, and greatly increases its cost. The civil engineers held a convention in Cleveland, March 31, and it is to be hoped they will succeed in bringing to bear on the government officials a pressure which shall secure a reversal of this policy, and shall open freely to all qualified civil engineers the opportunities which continually arise for employment in national engineering constructions.

THE so-called Knights of Labor have forced themselves quite obtrusively on public attention during the past few weeks, and have provoked and aggravated a feeling of turbulent discontent among building mechanics, which materially affects building interests, both increasing the risk and cost to contractors and alarming owners who contemplate investing. No one will deny that working men, like all other men, have grievances which are real, and likewise that "they are the natural results of existing facts and conditions." The same thing is true of professional men and manufacturers and contractors, and of all other classes. This world is not exactly a paradise for anybody. But wherein and how does the joining of the Knights of Labor, marching and shouting in their ranks, paying the assessments levied by their irresponsible leaders, and quitting work whenever they order a strike, tend to relieve a single one of the working man's grievances? On the contrary, with rare and trifling exceptions, have not the busy-body rulers of this order always

brought the working man into worse troubles than they had before, interrupting their employment by wanton strikes, only to disappoint them at last, and leave them to help themselves out as best they could? It is the boldest effrontery to declare in general that labor in this country is so oppressed by capital that it must maintain a position of perpetual warfare against its employers to secure its rights. Furthermore, it is a common observation that the noisy clamor about the poor working man is not raised by the more reputable ones among them, those of steady habits and masters of their trades.

SUCH men are intelligent enough to know that they can always find work on their own merits, and need no boycotting combinations to boost them into place. It is the incapable man, the botch, whom no employer wants on any terms, who is always descanting on the "rights of labor." In this free country where journeyman mechanics get from two dollars and a-half to five and even six dollars a day, and where a Peter Cooper rose from a five year apprenticeship at two dollars a month and board, to be the millionaire benefactor of New York, the upward path is free and unobstructed to every industrious and steady man who wishes to rise, but it does not lead through the stormy camps of trade unions and Knights of Labor. Let every such man simply mind his own business, steadily aim to do each day's work better than before, seize upon all opportunities for reading, study and self-improvement, avoid saloons and other doubtful resorts, and carefully save up his earnings, week by week, and he will find his road to advancement as easy as most other men's, and with as few wrongs to complain of. Should he become a contractor or a manufacturer and thus have occasion to hire labor, he will quickly become enlightened on the wrongs which employers experience from their workmen and others, a subject on which labor reform demagogues are as profoundly ignorant as on most other things except vamping declamation.

THE architects and also the builders and material traders of the country, in their manner of organizing and conducting their associations, strongly contrast with the labor organizations, while the prime idea of a trades union as understood at present, is a body formed for coercion, whose main argument is a strike. The building profession and traders take the more pacific but more tenable method of an advisory policy. In their association interests they look first to the public good and judge from that, *per se*, their own. So well do they understand and deplore the evils of the coercive system of the trades unions that their greatest effort is to keep from their procedure anything that will look like an effort to combine for the purpose of compelling any man or any class to look at things from their standpoint, while every effort is made to show by precept, argument and example that such recommendations as they may make are for the public good rather than for their own advancement. This is the true and, we believe, the only way in which any class interest may be advanced, while the fallacy of the coercive method has been proven by hundreds of years of struggle and misfortune. No argument should be needed to prove that nothing but general disaster can attend disputes between labor and capital; one is dependent on the other; their interests are one. If we might paraphrase Mr. Longfellow, we would say:

As unto the bow the cord is,
So unto capital is labor.
* * * * *
Useless each without the other.

As a dispute between husband and wife means the disruption of the family, so is dispute between these.

AND now comes an envelope addressed to ——— “Architect,” inclosing a “Price List of Building Materials.” Within this price list lurks a furtive and anonymous slip in colored ink, which tells the architect, “We will give you a *special discount* of 25 per cent from this list,” etc. If these dealers do not know that respectable architects everywhere have voluntarily agreed that the taking of compensation by them from any mechanic or dealer, whether in the shape of a discount, present, commission, or anything else, is disreputable, and that they regard offers of that nature as insults to their honorable reputation, it is because they do not read *THE INLAND ARCHITECT*. If they do not know these facts, they may do well to consider that they are adopting the surest possible course to have their names conspicuously recorded on the black list of all self-respecting architects whom they address. The profession will not tolerate assaults upon the honorable integrity of its members in their relations with clients, and will severely withhold their patronage from those who approach them with offers like the above, unless there be good reason for believing that the offense was committed inadvertently. It must be plain that a repetition of the act would be a dangerous experiment.

OUR wide-awake contemporary, *Building*, thinks it a grave defect in the revised Stockslager Bill, now before congress, that it omits specific mention of the sanitary engineer in its proposed appointments. It says the bill “does not make provision in any shape or manner for a proper and special consideration of a sanitary construction of the special buildings;” also, “Neither the commissioner of architecture with his hundred manifold duties, nor the special architect of a public building, can be expected to look after the sanitary arrangements as carefully as the details of such work require.” This is news to us, as we think it will be to the architects who have prepared this bill and to the profession generally. No doubt the proposed commissioner of architecture will have a “hundred manifold duties.” So have most other government officers of equal rank, and so has many an architect whose private practice is extensive. The planning and construction of sanitary arrangements are a part of these duties, as much so as the foundations, the framing or the roofing. No person who is unequal to the performance of manifold duties or to the design and supervision of the sanitary features of a building can be considered a properly qualified architect.

WITH our contemporary's admiration for the sanitary engineer, *THE INLAND ARCHITECT* has no controversy. In his legitimate province it extends a cordial welcome to the new-comer, and will reserve for him a front seat in the synagogue. But why put him forward thus as a rival in the architect's special field, the design and construction of buildings? We believe that this profession is as likely to keep abreast of the times in all matters pertaining to its duties as any other; that the design and direction of the sanitary arrangements of buildings is an inseparable part of those duties, and usually as properly performed as other parts; that in ninety-nine cases out of an hundred there is no occasion whatever for the intervention of the sanitary engineer in the planning and construction of buildings, and that in the hundredth case the architect may safely be trusted to call on the sanitary engineer for his advice, as he now calls on the chemist, the manufacturer, the hydraulic engineer, and other experts. We see no necessity for any legal interference, and we think the two professions will work far more harmoniously without than with it.

Polychromatic Ornament.*

BY IRVING K. FOND.

IT is beyond my intention or power in this evening's paper to explore all the broad field towards which this rich subject points me, but will confine my ramblings to rather narrow limits, making an excursion now and then, perhaps, out into the neighboring region, as a bright flower or an outcropping ledge of shining marble may offer an attraction.

It is my purpose to treat of constructed ornament and ornamental construction, and this with regard to the natural colors and functions of the materials employed rather than to dwell upon what may be termed applied ornament, of which fresco painting is the grand type, whether used pictorially or conventionally. In all ages and in all styles of architecture, color has been a necessary agent in the expression of the sweetest sentiment and deepest, richest feeling. The sister arts of Painting, Sculpture and Architecture walk side by side toward the realm of ideal, of perfect art. As these sister arts journey in loving embrace, let us make, or seem to make, no ungracious comparisons. I do not say, nor do I mean, in this remark on the agency of color, that painting is a more expressive art than is sculpture, or that the absence of color causes in sculpture a weakness of feeling and expression. Painting does not say to Sculpture: “Because of my color I am richer than thou!” nor does Sculpture say to Painting: “Because of the whiteness and purity of my substance I am stronger in expression than art thou!” But Architecture embracing both does say: “Because of color, which is thy wealth, O! Painting, and because of pure mass and rounded form, which is thy strength, O! Sculpture, I now walk with you. It is thy province, O! Sculpture, to hold in enduring marble an expression of whatever may be the permanent condition of man's soul, be that condition good or bad! It is thy province, O! Painting, with thy ready hand to catch and record the gleams and glooms, the quick transitions of the active souls of men—at one moment godlike—at another sadly fallen; and it is my province to rear an abiding place fit for these men—men, whose bodies are beautiful temples wherein the gods do dwell. And that the work of my hand may respond quickly to the cravings of man's soul and the needs of man's body, to my aid I bring the strength and purity of thy mass and form, O! Sculpture, and the richness and purity of thy color and line, O! Painting.”

Thus we see on what high ground architecture stands, and note the relation she sustains to the sister arts.

Let us now look closely into the methods architecture has used to make herself responsive to the sensibilities of men. She reaches the finest minds and purest souls through harmony—harmony and contrast—harmony in color, harmony in line and construction. It is not necessary that a façade should be monochromatic to be harmonious; the use of color never need destroy—the right use of color never will destroy the harmony of lines or the proportion of masses.

The dignity and impressiveness of a structure does not at all depend on a monochromatic treatment, while it is safe to say that the character of many a grand building has been undeveloped and expression has not been the strongest, because of a monotony or uniformity of color in all parts.

Architecture has been compared to music. The comparison is apt, and in no other phase more apt than in this color phase. We are now considering the building treated conventionally—building to which sculptured imitations of natural forms may or may not have been applied. On these imitations, or if you prefer, idealizations, I shall touch later. Now, I may say we have in the uni-colored architectural composition, the *tambour* of the orchestra. If the shadows are deep and broad we may have the two notes of the tympani. At the very best we have only perfect time sounded in full, rich tone. But no symphonies, no delicious concerted strains were ever written for the drums alone. The deep, rich foreground of the heavy strings and brasses, the middle distance of the reeds, the bright distance and blue sky of the violins are necessary to make up the perfect orchestral picture. The result is one grand harmony, comprehended in its unity from a distance. Come closer, and you may note the rich detailing of the flute, the harp and the viol. So is it in architecture! Would you hear the flute? See that rich, mellow freize! Would you know what the violin is doing? Behold that beautiful complication of rich and brilliant mosaics!—and that richly carved molding is an *obligato* for the harp. The courses, the moldings, the pilasters, mark the perfect time. The whole is a grand harmony, intoxicating at a distance; entrancing, when known and appreciated in detail.

Does the color picture clash or refuse to blend with preconceived notions of the sublimity and grandeur of old Greek temples enriched with the white marble sculptures of Phidias and men of great renown? Then change your ideas. Phidias sought and found his gods and men in blocks of purest, whitest marble. Whenever and wherever art has been at its highest, sculpture has been monochromatic. But that does not mean that the sculptured forms were not to be exposed against grounds of relieving or contrasting color. Phidias never intended that the lines of his work should be lost on a white marble background. I saw a number of beautifully chiseled marble statues drawn forth from among the ruins of the old Roman forum, while the work of excavation was in progress. Scattered all about were fragments of bases, shafts, capitals and freize bands, decomposed and dirty, dull and lifeless. I noted the change after the hand of the restorer had touched them; the statues glistened in their whiteness, and the fragments, cut and fitted and polished, took their places in a Florentine mosaic of brilliantly colored marbles. Then, for the first time, I had a clear conception of what architecture was “in the most high and palmy state of Rome.” There was evidently no fear on the part of the Roman masters of belittling their work in the employment of many and bright colors. Those who laid the foundations of Roman architecture were guided by the clear light of Grecian example, and made no mistakes in the treatment and application of sculptured ornament. Whatever they did betokened deepest feeling and highest artistic training, and

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has always appealed and must continue to appeal strongly to artists of whatever school. The main point of difference between the color system of this school and of that which followed, was in the size of the color units. In the Roman, they were comparatively large; in the Romanesque, they were small, often extremely small. Thus, the melting harmonies of the later style did not obtain in the former, in which sculptured forms rather than intricate or elaborate color design invited study of detail. The classic may be said to be the architecture of the sculptor—the Romanesque, that of the painter as well. In the Romanesque, sculptured forms of plants and animals abound, but are treated in a more conventional manner and always with a color principle underlying, which was imbibed in the Orient, for the Romanesque artists drew much inspiration from that quarter.

One of the most distinctive classes of the Romanesque is to be found in the Tuscan cities, and to a few typical buildings of this class I shall now direct attention. The cathedral, the center of that famous group at Pisa, will lead, not chronologically, for I shall pay no particular attention to time and space, but because leaving Rome and coming northward as we have, Pisa seems the most natural point at which to rest. This cathedral at Pisa is a most attractive church, both as to its exterior and interior. The general character of the design I need not dwell upon, for the arcaded forms of the "Tuscan Gothic" come to mind at the mere mention of Pisa. The strength given by the colored marbles to the arcaded forms of the wall and wall-veil is vital. In music there is the theme upon which the composer builds his song; in painting there is the tone primarily laid, a prevailing tone, which makes itself felt in and through the overlying colors, rules them and harmonizes the whole picture. In this cathedral the harmonizing agent is white marble, which is used in broad masses, while the black and colored marbles are laid in narrow bands, or used in rich panels of mosaic work. These panels are judiciously disposed upon the broad surfaces between the columns or pilasters of the arcades. The design of the wall and wall-veil is most strongly brought out by the horizontal bands of dark marble. Pilasters, which from the nature of their positions could not be brought into relief by shadows, are given definite form and place by contrasting colors. The arch forms are likewise so defined. The columns of the wall-veil, each of which is a unit, though they do not all have the same color, are brought into bold relief by the bands in the wall running behind them. The spandrels are everywhere filled in with exquisite patterns of mosaic work, while here and there crops out a finely chiseled grotesque. The darker marbles are more broadly treated on the walls of the interior. This is partly so that a "dim religious light" may be suffused through the church, and partly because the mellow tone of the white marble allows of a more free use of color. The reasons for using the color in the interior in panels and bands are the same, and as valid as for the use of color on the exterior. This church is a type of other Tuscan churches, some of which are more elaborate in design, but none is more impressive or more worthy of study.

The Duomo at Florence is of these others. Here the piers and pilasters are paneled, as also are the wall spaces, in regular geometrical forms. There is no particular body color, the white not being used in sufficient quantity to rule the whole; hence there is an angular spotted effect which almost destroys the lines of construction. However, the general massing is saved by the introduction of continuous courses of rich molding or of delicately worked mosaics. In Giotto's famous campanile—the bell-tower of this cathedral—a feeling of great strength and repose is given by broad bands of the darker marbles which encircle the base. A little higher are alternating bands of dark and light marbles. Then, above, the bands are molded or paneled or worked in mosaic patterns. In the tower, white is used sparingly but most effectively. On a ground of medium tone mosaics and ornaments in relief are introduced, and the effect is of a homogeneous mass which fairly glows. Another of the Florentine churches of deep interest to students is San Miniato, a building of the Basilica form, and in external color treatment closely resembling the Pisa cathedral. The interior is more suggestive of the Roman basilicas. On two of these, St. John Lateran's and St. Paul's before the walls, I wish now to touch lightly. The façade of St. John Lateran's has been restored or rebuilt in a strong Renaissance style. The interior, however, still glows with the many-colored marbles used in the Roman style, in huge shafts and broad frieze bands.

The pavement is a marble mosaic. The cloisters, however, in line and color, are the most brilliant Romanesque. The columns under the arcades occur in pairs, and are fantastically wrought, being intertwining, spiral or twisted, as the fancy of the designer or worker chose to have them. The moldings which are formed upon the shafts are inlaid with the most delicately shaped colored marbles. Each shaft is a masterpiece of man and nature working in harmony. The frieze and moldings of the entablature generally are ornamented in the same rich manner. The cloisters of St. Paul's before the walls are very like those just described. The façade has been recently restored after the original style, and is covered with mosaics worked into pictorial and conventional forms and religious symbols. The interior is most magnificent. The highly polished columns, standing in rows, divide the body of the church into central nave and four side aisles. These columns of varied color, standing with all the stately dignity of splendidly robed priests, are reflected from the pavement, which is of colored marble in simple patterns, with a surface which has received the highest possible polish. Even the notes which float in the sunbeams that struggle through the painted windows are reflected in the sea of color below. Were it not for the subdued light of the interior the eye would be dazzled by the kaleidoscopic display of reflected, refracted, brilliant color.

In the realm of color Venice rules the world; but Venice herself bows down at the feet of St. Mark's. The subtle delicacy of the Greek sculptor and the vivid imagination of the Oriental colorist have contributed to make St. Mark's the fount whence all artists draw inspiration. A more beautiful and harmonious color composition can exist only in the imagination, if indeed, it can exist there. It cannot be worked out in solid material. The rich warm marbles of the great arcades of the western front are relieved against a background of deeper color—a background of Venetian

mosaics in which blue and gold are freely used, and which give shadows of broken intensity. Toward evening, when the red sun has washed off all the shadows but narrow rings under the arches, the mosaic pictures melt into brilliant distance behind the arcades, which are brought into more vivid perspective by the shadows of the three flag-staffs which are thrown across them, shadows which are all broken up in their hasty attempts to scale the domes, to look over the intercepting staffs and catch a glimpse of the sun-god which had bidden them play all the warm afternoon upon the piazza, upon and among the gay throng of merrymaking sinners, and had allowed them to play at hide-and-seek on the bright features of grave St. Mark's. I have watched these shadows, and have thought on them and on that "walking shadow"—life. They were all playing at the same game, all climbing, and climbing, and climbing, and trying to catch a glimpse, a little gleam, of the great light that brought them into existence, and always having the vista blocked by the dark side of a grim fate, till at last the sun has set and without the coveted sight, the warm shadows die and fade into the cold shades of night. The expression of this thought is pardonable here, for while we are designing and rearing our polychromatic buildings, we are also forming and rounding a many-sided, many-colored life, and the success and beauty of both building and life depends on the use we make of opportunities and materials procurable and at hand.

Let us now return to St. Mark's, and study the methods and materials of this and neighboring structures with a view to comparing, or, rather, contrasting them with work nearer home. The original polish has nearly vanished from the walls of the church inside and out, but age has placed in its stead a bloom and mellow softness; all hard lines are rounded; nothing protrudes with self-assertion. Piers and columns arise as if growing naturally from the rich mold of the undulating pavement. Above the shaft the capital spreads its leaves, or wraps them, closely nestled, about the parent stem; and above all sway the wavy lines of the roof. All swims in an atmosphere of subdued and dreamy color. This color charm is not confined to ecclesiastical architecture, for structures, civil, commercial and domestic, glow with the same soft radiance. The Doges' Palace, the Ca d'Oro, and many other buildings of lesser importance, will hold one for hours in studious contemplation.

Is it because of the color genius of the place that these things were possible to Venice? I think not. Is it because of a lack of color in earth and sea and sky that these things have not been possible to us? I know it is not. Over smoky Chicago I have seen a sunset sky as deeply dyed in crimson and vermilion as any that ever painted "Peter's Dome" black by contrast; and right over the black heart of this city hang skies whose delicate pinks and greens and golds lend a poetic charm to even the vulgar towers and spires which, in a pride begot of wealth and ignorance, assert themselves above their humble neighbors. Over Washington, our capital city, which contains more dull and stupid architecture in proportion to its importance than any other city of our land—over Washington and the smutty, whitewashed dome I have seen a sky of the deepest liquid blue, as blue as any that ever spanned the Neapolitan bay, or so spread itself over Milan, that the cathedral seemed a cameo of the most marvelous fineness carved on its azure breast. Nature is not lacking in color. We and the people for whom we build need artistic training and education.

It is curious sometimes to note what our education, or lack of education, and our surroundings, have led us to consider *artistic*—in an artist or a model, unshaven beard and unkempt locks; in a building, roughness and vulgar crudity. Will you get the effect of the softness which comes only with age in a freshly laid mass of brutal stonework? Hardly. There is more or less of pleasing effect in the little lights and shades of freshly-broken rock-faced work; but age and exposure soon robs the work of these, and leaves nothing to take their places—nothing but a characterless mass of crude stonework. If the designers who now affect the Romanesque will but remember the buildings which have inspired their work, or if they, not having studied the buildings, will take their glasses and examine their photographs, they will see that the lights and shades and shadows are not caused by rock-faced work, but come from masses of rich carving, and in this they will find that color plays an important part. Wood must be worked and polished if the color and beauty of the grain is to be brought out, and so must stone. A table or chair of rough split wood would excite our sarcastic comment, or at least our tearful smiles, if we thought the designer in earnest in his work. Of course, rough unfinished chairs are all right if they are to serve a purpose, and that purpose be to prevent people from sitting in them. But then they are not chairs. And so again with stonework. If you are building a Florentine palace, and fear street rioters and bands of armed marauders, why, make the wall sharp and rough and brutal, so that he who falls against it shall be broken. If you are building a modern home, or church, or commercial building, work the stone smooth, and make it inviting, safe to touch without injury. In the architecture of today rock-faced work has but two functions—the lesser to guard greatly exposed parts; the greater, to serve as discords or transition chords are made to serve in music, to make the finely worked up melodies more melodious by contrast. The feeling and color of a polished mass of stonework may, by an artist, be made more deep and vivid by a happy contrast with rock-faced work.

Other materials than stone may be made of value in the permanent coloring of buildings. The Gothic workers of the French schools show a decided aptitude in color design in the use of brick, and in the combination of brick and stone. Their example might serve us in good stead in the matter of our more economical work, where the Venetian would lead us in excess of our means. But the modern French school has failed in the exterior coloring of its greatest work, the Grand Opera House at Paris. The interior, from a Renaissance point of view, is satisfactory, and from any color point of view is rich and lavish in the extreme. But the exterior is a huge mass of dull color, which is broken very unattractively by light colored marble columns and bronze moldings and crestings, and statues. The work possesses this advantage—time will tone it down, and bring the parts into harmony with each other.

I can hardly close this paper without making mention of the color

work of the Arabs and Moors as I found it in Spain. The mosque at Cordova shows some very bold color work in the use of red brick and yellow stone and marble in the interlaced arcades of the interior. There are four hundred and fifty pillars in the interior, hardly any two being the same in color. "The Marble Forest" is a very applicable name for this building, by reason of the great number of columns, and the manner in which the arches springing from them interlace. In the Alcazar, at Seville, and in the Alhambra, at Granada, may be noted a full development of a system of decorating with glazed tiles, each tile being a color unit in a complicated color design. This system lies between decorative painting and the Italian system of encrusting the walls in fine marbles. In the warm countries, where strong sunlight on whitewashed walls abound, the tile decorations, for they are used inside and out alike, are extremely sparkling and attractive. The Italians used glazed terra-cotta in a similar manner to decorate their buildings. Animal and plant forms which do not exist in the Moorish work appear in this, giving much life and character, as well as poetry and color.

We have advanced far in our architecture toward supplying the bodily need of man. To make our architecture responsive to man's æsthetic cravings, let us go to the fountain-head of color and form. Let a love of nature sway our minds; let us translate her; let us study her in all her attitudes, in storm and sunshine, in cloud and sea, her working in animal and plant, and when we appreciate her, even in part, we shall begin to form an architecture which will appeal to the mind and heart of man—nature's God-like child.

More Kicks than Half-pence.*

BY T. B. ANNAN, ARCHITECT.

IT is not often that one of our profession is invited to submit an essay other than the well known and much abused privilege of essaying a design for greater or less compensation, so that when the opportunity presented by the state association was afforded me, I collared it and determined to make my kick. In the exercise of a wise discretion, our Executive Committee will probably never permit the evidence of these kicks to see the light. All right; but there's a grim satisfaction sometimes in deliberately swearing on paper in black and white, though no eye, save the writer's, ever sees the profane invocation.

Will some of my more experienced and learned brethren tell me, for example, some infallible method, some rule, some guide for determining the style of architecture to which many, if not most of our later American and English structures belong? What, for example, is Eastlake? Is it a style? Is it furniture decoration, or does it belong to the bed post and valance period, and how do you tell it when you see it? What is modern Gothic? Is it really a style? or does it belong to the circus horse era? And what is this new serio comic effort now running riot all over the land? Is this an effort to emancipate ourselves from the despotism of the classicists and the purists? What is Queen Anne? How do you know *that* when you see it? Can I take it for granted that when the roofs and gables of a modern house seem to have committed a series of unblushing indiscretions with the chicken coops, the stables, pigeon houses and dog kennels, that I have discovered a Queen Anne motive in the design; and how can I make sure that it isn't really of the Georgian era?

But a greater difficulty of definition than any of these has beset me. What is our vernacular style? I saw *that*, in an eastern architectural journal of deservedly high character, several years ago, and I determined to plaster it on to somebody's design at the first decent opportunity, but on reflection I thought, perhaps you may be asked to explain what our vernacular style is, and how then. Well I didn't know; do you? Of course I have two or three theories on the subject, some of which I am going to have stuffed, but meanwhile I am uneasy about it, and any little suggestions and information will be duly appreciated.

How about Neo-Grec? Is this a kindred style with French Renaissance? I have known the two to be used in describing the same building, and let us confess that we are nothing if not exact. I want to be set right also in relation to Florentine, Romanesque and Byzantine characteristics. It is a little unfortunate you know to admire or criticise a design, referring incidentally to the delicate Florentine decoration or detail, and to have your ignorance or misapprehension made bluntly manifest by the author, who tells you: "Why, man, that's pure Romanesque, or Byzantine, or Runabogen," as the case may be.

I know a landscape painter (most of you know his name and work), who, upon one occasion, asked Mr. S., the art critic of a leading paper, to give him his candid opinion of one of his pictures, then on the easel, and representing a Minnesota lake. S. finally consented to do so; and, among other of his criticisms, remarked: "Now, M., that water, for example, is simply wool in a state of violent agitation." M. was indignant and said: "Look here, S., I don't pretend to be a marine painter, but damme, sir, I'm not a wool painter." Nor would it be quite the fair thing to denigrate some of the modern ten or twelve-story French flats as "turkey roosts."

There's another kick I want to make, and it is just this; what warrant, either in good taste or in an endeavor to create a vernacular style is there, or what apology can be made for the frequent and absurd violations of every precept of classic or Gothic, ancient, or modern styles in many of the ambitious designs that are frequently illustrated, and almost as frequently perpetuated, in brick and mortar? Entablatures, tormented with such a tautology of moldings, dentils and modillions, as to destroy all idea of detail; impertinent pilasters, forty diameters high, founded on nothing, and terminating under the apex of a pediment with a Gothic pitch and "Queen Anne" detail; terra-cotta doing the duty of stone or iron; fancy brick work that would make one of the dead and gone South German masons turn over in his grave, and a general hodge-podge or ollapodrida of Greek, Gothic, bad French and Italian, as should provoke the applause of the unwary and make the judicious grieve.

Frankly then, are these things about which I kick evidences that we

are gaining strength, purpose and freedom from the thralldom of the schools and the ages, or that in soaring after the infinite and diving after the profound, we are creating a vernacular full of apologies and anachronisms, affectations and having an air of self-assertion, utterly lacking in dignity or quiet repose?

Is there any good reason why architecture should not develop and demand specialists, as its sister arts and sciences have done? There are too many of us who labor under the notion that we are equally as competent and at home in designing a church or a skating rink, a set of bar-room fixtures or the stalls in a cathedral, a state house or mansion. Way down in the depths of your inner consciousness you know that there are limitations, even to your genius, and you also know that you have drawn many a deep sigh when, one or other of the above, it has been your fate to *have* to design, and said, "well, what the devil do I know about this thing anyhow." No, you didn't. Well, the other fellows did all the same, and a barrel full of head aches they got out of it too.

There is one other kick I have to make, and that in deprecation of the idea, which has somehow become prevalent, that we, as architects, are largely engaged in depreciating each other and each other's work. I believe this to be the work mainly of a few carping, surly, jealous sore-heads, who, having been pitchforked into the profession, "sent into the world but half made up," have never realized that they are out of joint with the times and that the world still continues to turn round. There are, fortunately, no Joshua's amongst them. Fortunately this class is, I sincerely believe and hope, growing daily less in numbers. The feeling is growing stronger that Uncle Toby's dictum that "the world is wide enough for thee and me" is true.

Out of an experience running through thirty years of acquaintance with and knowledge of my brethren, scattered from our boundary line on the north to the gulf, and west to the Pacific coast, I have found more genial good fellowship, more frank, unaffected good will, more real, earnest sincerity of purpose and adhesion to the claims of our common art, than among any other class of professional men; artists, pure and simple, alone excepted.

I have known such men lay aside other and pressing work and devote their time and their talent to the service of a brother architect to help him and his cause, and to protect the right and defeat the wrong. I know men in my profession who have voluntarily offered, not once but time and again, their influence and means to promote the welfare of one of their number, with whom, on the morrow, they might be and have been in direct competition. I know, personally, of only one conspicuous exception to this rule.

I have been the recipient of just such courtesies at the hands of my friends in the profession, and am glad of this opportunity to tell of them, and to kick against the converse proposition of selfishness and jealousy.

Our Illustrations.

Design for a brick mantel in St. Louis hydraulic-press brick, by Harry Laurie, Chicago.

Sketches of St. Marks, Venice, and the Mosque, Cordova, Spain, by Irving K. Pond, Chicago.

Residence for L. H. Clark, Esq., on Prairie avenue, near Twenty-seventh street, Chicago, by W. W. Boyington, architect. It will contain thirteen rooms; height two stories and attic, 30 by 60 feet. Pressed brick and terra-cotta will be used. The finish of the first floor will be in hardwoods; the others in white pine, oil finished; cost about \$10,000.

Cathedral for Roman Catholic Society of San Francisco, Cal., by J. J. Egan, architect, Chicago. It is to be built of brick with stone trimmings, and granite steps. It covers 192 by 112 feet, contains two galleries and has a seating capacity for 1,500. The roof and spire are constructed with a special view to resist the effects of earthquakes and high winds. The roof is supported by laminated wood trusses which rise from below the main wall and branch outward to the center of the roof, making a continuous truss without tie-rods. The spire is constructed double, with a truss system in the center, continuous from the base of the tower. When completed, the estimated cost will be \$250,000.

Group of dwellings, apartment suites and stores, for Theophile Papin, located at the intersection of Olive street and Compton avenue, St. Louis, Mo., by A. F. Rosenheim, architect, St. Louis, Mo. The buildings are constructed of St. Louis hydraulic pressed brick with cutstone and terra-cotta ornamentation. Of the ten buildings which compose the group, there are eight dwellings, two stores and three sets of apartments or flats. The grounds cover 138 by 176 feet, admitting of a large interior court with a central lawn relieved by flower beds and shrubbery, flanked on two sides by the smaller private grass plats of the dwelling houses, the whole surrounded and intersected by graveled walks with cutstone combings. This court or garden is a distinguishing feature of the entire block. It is entered from the two streets by handsome cutstone archways with ornamental wrought iron gates. The buildings were erected for Mr. Papin by the late Major Francis D. Lee, the distinguished architect, whose untimely death occurred on August 26 of last year. Mr. Alfred F. Rosenheim, who, in Major Lee's lifetime, had been his chief assistant and superintendent, took entire charge of the work after his death and completed it. The property, all told, represents an investment of about \$100,000.

THE highest chimney in the world, according to the *Journal of the Society of Arts*, is said to be that recently completed at the lead mines of Mechnich. It is 134 meters (439' 6") high, was commenced in 1884, and was carried up 23 meters before the frost set in; building was again resumed on the 14 of last April, and it was completed last September. The foundation, which is of dressed stone, is square, measuring 11 meters (33 feet) on each side, and is 3' 50 meters (11' 6") deep; the base is also square, and is carried up 10 meters (33 feet) above the ground. The chimney-stack is of circular section, 7' 50 meters (24' 6") diameter at the bottom, and tapering to 3' 50 meters diameter (11' 6") at the top, and is 120' 50 meters (395 feet) high.

* Paper read before the second convention Missouri State Association of Architects, January 12, 1886.

Illinois State Architectural Association.

THE subject before the last meeting of the Illinois State Association, on the 1st instant, was the reception of a draft of a state law governing sanitary construction in buildings, submitted by Dr. Oscar De Wolf, Dr. J. E. Gilman, and W. H. Genung. Vice-president H. L. Gay in the chair.

The secretary read the following letter from the president.

H. L. Gay, V.-Pres. I. S. A. A.

DEAR SIR,—I am reluctantly compelled to forego the pleasure of being present at our monthly meeting today, and therefore notify you that you may preside at same. My partner was called away to New York, and I am in the midst of very exacting business. I find two important engagements have been made for me this afternoon, and I am sorry, because I always intend to give thorough attention to the business of the Association.

Yours sincerely, D. H. BURNHAM, President I. S. A. A.

After the reading of the minutes of the previous meeting, by the secretary, and their approval, Mr. Genung, as the representative of Dr. De Wolf, read the following paper, which is the complete draft of the proposed sanitary law.

Mr. President and Gentlemen,—Pursuant to your request, the accompanying draft of a proposed law is presented, having for its purpose the regulation of all sanitary appliances and conditions to be provided in all places of habitation to be constructed in all cities and towns within this state which have a department or board of health. The provisions of the proposed law place this first and greatest responsibility for providing these conditions with the architect, because he is the person who plans and describes in his specifications, and generally superintends and directs in detail all the several parts of a building during construction. It is not claimed that this proposed law, as presented to you today is perfect in all its parts, because I believe that the results of one man's thoughts cannot be as perfect as those of many men of equal experience and of the same profession. It is therefore to be desired that each section of this law will be taken up separately and discussed by your association, with a view to perfecting the imperfect portions, and making of the whole the most complete and best sanitary law in existence. It cannot be denied but that the law is a necessary one, and I believe it to be equally true that no one is better qualified to understand its necessities and provisions than the architect. The benefits to be derived from the enforcement of this law are, that it contemplates securing the best possible sanitary conditions in all habitable buildings, and that these conditions will be uniform in all classes of buildings. It will protect the conscientious architect and punish the careless ones, and take much of his work from the hands of botches and incompetents, thereby raising the standard of all this class of work to the same desired point. A uniform enforcement of this law will lower the mortality rate of this city to a point below that of any city in the world. Unlike some, I do not believe that this law should place this work in the control of sanitary engineers, for the reason that, except possibly in cases of large public works, the architects of this state at least are perfectly competent to carry out any of the requirements of the law. Has not the calling of an architect been looked upon and recognized in ALL ages as requiring equal intelligence and ability to that of any other art or profession? Should he now be asked to occupy second place to a calling younger than his own? I think it was Garibaldi who once said, that it is human nature to eat more than is needful when opportunity presents itself, and that many of us often drink too much; but that no one can be too well housed. This would imply that the very best sanitary surroundings that can be secured are not too good, therefore I ask you to perfect this imperfect law and thereby place all the responsibilities where they belong, namely, with the architect to first plan and provide for the best the law requires; and second, with a proper official to enforce these requirements for all alike.

AN ACT FOR THE REGULATION AND INSPECTION OF TENEMENT AND LODGING HOUSES, OR OTHER PLACES OF HABITATION.

SECTION 1. Be it enacted by the People of the State of Illinois, represented in the General Assembly, That it shall be the duty of any architect or architects, builder and builders, or of other person or persons interested in, any projected tenement, lodging house, or other places of habitation, in any city or town having a department or board of health, to submit correct and complete plans and specifications, as made by any such architect or architects, builder or builders, or of other interested person or persons, or for any such building or buildings, to such department or board of health, or the lawful representative of such department or board of health for examination and approval; that said plans and specifications shall plainly show and describe all the sanitary conditions and arrangements to be provided in such building, and shall remain in the office of said department a sufficient length of time for a proper examination and consideration to be made of them; and that a copy of said plans or so much of them as may be demanded by said department, together with a full description of same to be filed upon blanks to be furnished for this purpose, which shall be filed in the office of said department, immediately upon the approval of same, and before constructing any portion of such building.

SEC. 2. It shall be the duty of any plumber or plumbers, or other person or persons interested in the contract or execution for the plumbing work of such building or buildings, and before doing any work in a building, except in case of repairs, to obtain a certificate from the proper person that the drain connecting such building with the public sewer has been properly accepted, and shall present such certificate to said department of health, and shall file in the office of said department, upon blanks to be provided for that purpose, notice of the plumbing work to be performed, together with a plan and written or printed description of same, which shall show the whole course of the said plumbing work from its connection with the private drain to its termination above the roof of the building, and also all branches, traps and fixtures to be connected therewith, which plan and description must be approved by said department of health before executing any portion of the said plumbing work.

SEC. 3. It shall be the duty of any plumber or plumbers, or other person or persons interested in the contract or execution of any plumbing work, other than repairs, after the completion of said plumbing work, and before any of said plumbing work is concealed, or in any way covered up in any building or buildings, or on the premises connected with said building or buildings, to notify in writing the said department of health, at least twenty-four hours—exclusive of Sundays and legal holidays—previous to the completion of the said plumbing work, that the same is ready for inspection; and it shall be unlawful for any plumber or other person or persons, to cover up, or in any way conceal such plumbing work in or about such building or buildings, until the said department of health shall approve of the same.

SEC. 4. If any architect or architects, builder or builders, violate the provisions of this act, he or they shall be fined in a sum of not less than \$100 nor more than \$200 for each offense.

SEC. 5. If any plumber or other person or persons interested in the plumbing work, violate any of the provisions of this act, he or they shall be fined in the sum of not less than \$100 nor more than \$200 for the first offense, and the further penalty of \$10 for each and every day such plumber or other interested person or persons shall, after first conviction, neglect or refuse to comply with any provisions of this act, or the written instructions of the health commissioner or commissioners, and for the second offense, a like penalty and a forfeiture of his or their license to do business in said city for one year after conviction.

SEC. 6. Inasmuch as the health of the people is endangered, an emergency exists requiring this act to take effect immediately; therefore, this act shall take effect and be in force from and after its passage.

SEC. 7. Every habitable room in any building must have at least one window of not less than one-tenth the superficial measurement of the floor of the room it serves, and such window or windows shall be made to slide vertically, and shall open directly to the external air upon a street, alley or yard, or upon a court or light shaft; and it shall be unlawful to place a window or other means for lighting or ventilating any part of a building in a party wall, or wall abutting premises not owned by another person than the one owning the premises described in such plans and specifications.

SEC. 8. Every light and air shaft for habitable rooms must be at least fifteen feet in area for a three-story building, twenty feet in area for a four-story building, and twenty-five feet in area for a five-story building, and in every case not less than three feet wide in the clear; and shafts between two houses and common to both, must be double this area and not less than six feet wide.

SEC. 9. Where light or air shafts are to be covered with glass to admit light, they shall be carried at least three feet above the roof and provided with openings protected by slats so arranged as to admit air, said openings to be at least equal in area to the area of the shaft.

SEC. 10. In every building hereafter erected or converted, every habitable room, except rooms in an attic, shall be in every part not less than eight feet in height, from the floor to the ceiling; and every habitable room in an attic of any building shall be at least eight feet in height, from the floor to the ceiling throughout, not less than one-half the area of such room.

SEC. 11. The hall or halls of every building shall open directly to the external air, with suitable windows, and shall have no room or other obstruction at the end, unless sufficient light and ventilation is otherwise provided for said halls in a manner approved by the proper officer of the said department of health.

SEC. 12. Water-closet rooms shall not be ventilated by a shaft which ventilates habitable rooms; and where they do not otherwise open to the external air, they must be ventilated by means of a separate shaft to be not less than three feet in area for one water-closet, and an additional foot to be added for each additional water-closet using the same shaft; the said shaft to extend above the roof, and to be arranged for the admission of light and air at the top, in like manner as the shafts for habitable rooms.

SEC. 13. No alterations, additions or converting to a different purpose, which will change or alter any or all of the sanitary conditions or arrangements in any building, shall be made, except upon the express written approval of the proper officer of the said department of health; nor shall any additional structure be erected upon any lot on which there is already a building except upon such approval and a special written permit.

SEC. 14. In all buildings in which the story or floor next above the ground, or any portion of which is to be occupied as a place of habitation, and all cellars, shall have all the ground surface inside the building walls covered with at least three inches of macadam stone, gravel stone and cement, or other suitable material, mixed to a proper consistency, and applied so as to make the whole water-tight, and finished to a smooth and even surface, and the lower or ground floor of every habitable room shall have a clear open space of not less than two feet beneath it, and shall have suitable provisions made for a free circulation of the air in said space.

SEC. 15. All outside foundation walls that are not fully exposed to view on both sides shall be plastered not less than one-half inch in thickness on their entire outside, with a heavy coating of cement or other impervious material, from their bottom upwards to a point not less than six inches above the finished grade of earth or abutting substance; and the entire top surface of such wall, at a point not less than six inches above said finished grade, shall be heavily coated with asphaltum tar applied hot, or some other material which will effectually and permanently prevent moisture from being carried over said walls.

SEC. 16. Every cellar or lower story of any building, any portion of which is below the established or lawful grade of street adjoining, shall be provided with a proper subsoil or agricultural porous tile drain-pipe not less than one and one-half inches internal diameter, to be placed under the outer half of, and not less than one foot below the entire outside foundation walls; also a like drain pipe to be placed inside of and as near as practicable to such walls, the top of such drain to be not less than two inches below the finished concrete or other floor which is laid upon the ground; such drains shall have a true decline toward its discharge end equal at least to its internal diameter, and all connection and abutting joints shall be so made as to exclude sand, silt or other solids, and shall connect with the main building drain at some point outside the building walls, and through a proper gravel or sand trench, tide-valve and man-hole, and no substance shall be permitted to enter these drains except sub-soil water.

SEC. 17.—Each and every building must make direct connection with the main sewer in the street. Under no circumstances will two or more houses be permitted to make such connection through one pipe, nor to carry their drainage in pipes laid beneath or through adjoining property. If no public sewer is provided in the street adjoining the premises, then the main building drain shall connect with a proper stone or brick and cement cesspool of a capacity and location to be approved by the said department of health.

SEC. 18. The main sewage drain and connecting branches for every building shall be constructed of iron inside the building walls and be not less than one-fourth inch in thickness and of such internal diameter as the said department of health may prescribe, and all such drains must be permanently placed in full view and made water-tight throughout their whole length; hard burned glazed tile pipe may be used if centrally imbedded in a solid cement grouting one foot larger than the outside diameter of such drain, which imbedding shall be fully exposed to view and placed above or upon the finished concrete floor of such building.

SEC. 19. All such drains shall have a true decline, toward their discharge end, of not less than one-eighth of an inch per foot, and all metal drains shall rest on piers of masonry, or on the footing-stone projection of walls, or be secured to walls of buildings with strong iron hooks, or other equally permanent method, and shall be heavily coated outside and inside with asphaltum or other coating to prevent oxidation.

SEC. 20. No grease basins or other receptacles for retaining sewage filth will be permitted in or upon any premises, except upon a written permit from the said department of health; and all waste or drain pipes which receive grease in any form shall connect with the main sewage drain in front of a soil pipe connection.

SEC. 21. The main sewage drain for every building shall be provided with a proper trap outside the building wall, and also be provided with an inlet for fresh air, just inside the said trap; but no sewer pipe trap will be permitted to be placed at the foot of a ventilating, waste or soil pipe; but rainwater leaders which do not extend to highest roof gutter of the building they serve, and when connected with soil or drain-pipes, shall be suitably trapped, before connecting with said soil or drain-pipe.

SEC. 22. Sewer, soil pipe, or waste pipe ventilators shall not be constructed of brick, earthenware, or sheet metal, and chimney flues shall not be used as such ventilators.

SEC. 23. All plumbing work shall be executed in a thorough and proper manner, the materials for which shall be of good quality and free from defects, and shall be so placed as to be readily inspected.

SEC. 24. Every soil-pipe and waste-pipe of iron or lead, shall extend through and at least two feet above the highest roof of the building of which it is a part, open and undiminished in size, and no such extended pipe shall have its open top end nearer than ten feet to the window or door of a habitable room; and such pipe shall continue in an upward direction, and no horizontal or nearly horizontal portions of such pipes shall be permitted which aggregated portions shall exceed one-half their vertical measurement, and all divergence from a straight line shall be made with curved pipes, and connections with horizontal pipes shall be made with Y-branches of proper size.

SEC. 25. All lead pipes shall have solder or other metal "wiped" joints, and iron pipe joints shall be run with molten lead, or a cement made of iron filings and sal ammoniac, and such joints shall be made impermeable to gases.

SEC. 26. Every sink, basin, bath-tub, water-closet, slop-hopper, and each set of trays, and every fixture having a waste-pipe, connecting therewith, shall be furnished with a proper trap, which shall be placed above the floor on which the said fixture rests, and as near as practicable to the fixture it serves; and all such fixtures shall be placed upon or attached to branch waste or soil pipes, and never upon or to the main waste or soil pipes, and no trap or obstruction of any kind shall be placed in or upon any such main waste or soil pipe, and all traps shall be protected from syphonage or air pressure by special air pipes of a size not less than the waste pipe it serves; but air pipes for water-closet traps shall be of not less than two-inch bore for such pipes of thirty feet or less in length, and of not less than three-inch bore for such pipes of more than thirty-feet in length; and all such air pipes shall be run as direct as practicable, in a continuously ascending line to their upper end, and shall be not less than one inch greater diameter than the pipes they serve, at and beyond the roof they pass through.

SEC. 27. Drip or overflow pipes from safes under water-closets, and other fixtures, or from tanks or cisterns, shall be run to some place in open sight, and in no case shall any such pipe be connected directly with a drain, waste pipe, or soil pipe; and no waste pipes from a refrigerator or other receptacles in which provisions are stored shall be connected with a drain, soil-pipe or waste-pipe.

SEC. 28. Every water-closet, or every line of water-closets on the same floor shall be supplied with water from a tank or cistern, and the flushing pipe shall not be less than one inch in internal diameter.

SEC. 29. When a lead pipe or trap is connected with an iron pipe, the joint or connection therewith shall be made through a metallic sleeve or ferrule, and calked with lead or otherwise, as provided for joints in other iron pipes.

SEC. 30. No cistern, tank or other receptacle for drinking water shall be lined with lead, and when the pressure of the pumping works of any said city or town is not sufficient to supply such cistern, receptacle or flushing tank, a suitable pump shall be provided for such purpose.

SEC. 31. A grease trap, or other proper receptacle, shall be constructed under the sink, and above the floor on which it rests, of every hotel, eating-house, restaurant or other cooking establishment, excepting a private residence, and such trap or receptacle shall be constructed of the material and in the manner directed by said department of health.

SEC. 32. No steam exhaust pipe shall be connected directly with any soil, waste or drain pipe, except upon the written permission of said department of health.

SEC. 33. No plumbing work shall be used until the same has been inspected or tested, and approved in writing by a proper officer of said department, nor until such approval is filed in the office of said department of health.

SEC. 34. All steam, hot water or hot air heating apparatus shall be provided with a proper air duct to supply such apparatus with fresh cold air, and such duct shall be made of non-combustible and imperishable material and never be placed below the floor of the room in which the said apparatus is to be placed; also that all "furnace pits" or air chambers placed under said heating apparatus shall be made of non-combustible and impervious materials; they shall be made water-tight, and shall in no case be connected with any drain, waste or soil pipe, catch basin or cesspool.

SEC. 35. A suitable automatic filling water-pail shall be provided in all hot-air heating apparatus, in which the air to be heated shall at any time come in contact with fire-heated metal or fire-brick; and no respired air, or the contained air of any room, shall be reheated for use in any living or sleeping-room.

SEC. 36. Any duly authorized officer of the said department of health shall, so far as may be necessary for the performance of his or their respective duties, have the right to enter any building or premises in such cities or towns.

SEC. 37. Any court having equity jurisdiction, in term time or vacation, may, on application of such duly authorized officer, by any suitable process or decree in equity, enforce the provisions of this act, and may, on such application, issue an injunction to restrain the use or occupation of any building or structure in any such city or town, erected, altered, maintained, or used in violation of this act.

SEC. 38. Any person or persons who shall violate any of the provisions of this act, where no other penalty is provided, shall be subject to a fine of not less than \$10 nor exceeding \$100 for each and every offense. All acts and parts of acts inconsistent with this act are hereby repealed.

SEC. 39. This act shall take effect and be in force from and after thirty days after its publication.

A motion was made to read and discuss the law, section by section, which was withdrawn at the request of Mr. Adler, who suggested as a substitute that inasmuch as this proposed law was quite long, its provisions of great importance, and as the attendance was quite small, that he would make the following motion :

Resolved, That the proposed law be printed and submitted to all the members of this Association, and be taken up for criticism at the next meeting of this Association. The secretary shall at once notify all members of this, and shall request them to notify him in writing, before the beginning of next meeting, of the articles of the law to which they may take exception; and, if possible, the nature of their exceptions and the reasons therefor; and that at the next meeting of the Association the law be taken up and discussed article by article before it receives the endorsement of this body.

The motion was carried, and the members went into informal discussion, of which the more important parts are given.

Mr. F. Bauman said: It seems to me that if this is left loosely to the perusal of each and every member of this board, that we get very little, if anything, done in regard to it, and it would seem to me far better if we have a special committee appointed to do this revision—a committee of three—and leave this revision (if it needs revision at all) and read it again before this board of architects, and then have the action which is required in regard to it taken.

Mr. Adler: If you will make the motion I will second it.

Mr. Bauman: I do make such a motion.

The Chair (Mr. W. W. Clay, who had taken the place of the vice-president): It is moved and seconded, gentlemen, that a committee of three be appointed to consider the new law, and to make, at our next meeting, such suggestions as they may see fit.

The motion was carried.

Mr. Bauman: I think, Mr. Chairman, it would be proper to have this committee irrespective of the chair, and that the chairman be an ex-officio member of this committee.

The Chair: I appoint Messrs. Burnham, Adler and Bauman.

The Chair: Perhaps Dr. Gilman would favor us with a few remarks.

Dr. J. E. Gilman: I have not very much to say. The object of this law, as I understand it, is to make sanitary doctors of the architects, as well as sanitary architects of the doctors. As we have it here, this law may be deficient in some particulars of practical action. As it is here drawn, is the way sanitarians would like to have it, as a means of prevention of certain defects that are present now, and the practical operation of it is where you gentlemen are supposed to fill your part. We furnish the ideas and you furnish the practical making out of those ideas. That there is a necessity for the law there is no question. Look at some of the buildings that are put up here in this city, built with water-closets that are completely enclosed in the house, without any method of ventilation. I know of a house not far from me now, where the water-closet is built at the end of the hall, and the only means of ventilation of that closet is through this hall, the air being carried into the rooms, causing, I have no doubt, a great many diseases. The great advantage of the law that Mr. Genung has told us of is the saving of lives. As to the practical working of it, that is something that will need your criticism. There is among the doctors a very great lack of knowledge of what is needed to make a house to perfectly conform with all the laws of sanitation; and there seems to be a similar lack of knowledge among architects. I hope, by coming together in this way, that we will get the matter regulated, so that it will be contrary to law to build a house that is going to prove a death-trap to the people who inhabit it.

After more informal discussion by members, upon points which will be touched upon in the regular discussion of the law at the next meeting, the assembly adjourned.

MESSRS. BLEININGER & HASSELMANN, two German chemists, have, it is said, recently patented a method for obtaining products that will be more resisting to humidity, etc., than ordinary bricks and tiles. After drying and grinding the clay, they make a mixture as follows:

Clay.....	91½ parts.
Iron filings.....	3 "
Table salt.....	2 "
Potash.....	1½ "
Elder or willow wood ashes.....	2 "

The whole is heated to a temperature varying from 1,850 to 2,000° C. (3,362 to 3,632° F.) At the end of from four to five hours the argillaceous mixture is run into molds, then rebaked in the ovens (always protected from the air) at a temperature of 842 to 932° F. The product may be variously colored by adding to the above 100 parts: 2 parts of manganese for a violet brown, 1 part of manganese for violet, 1 part of copper ashes for green, 1 part arseniate of cobalt for blue, 2 parts of antimony for yellow, and 1½ parts of arsenic and 1 part oxide of tin for white. These products resist the action of acids, and are well adapted for sewers, etc.

Chicago Master Carpenters and Manufacturers.

At a meeting of a number of the leading contracting carpenters and mill men at the Grand Pacific Hotel, March 20, it was resolved to form an association, and a call signed by eighteen firms was issued to meet March 27. A committee of three—Wm. Hearson, Murdock Campbell and Wm. Grace—were appointed to prepare articles of organization. The names of firms signing the call were: The W. E. Frost Mfg. Co., Hearson & Payn, The Campbell Bros. Mfg. Co., William Jackson, Henry Gilsdorff, William Mavor, Steinmetz & Eilenberger, Ira A. Heath, Wm. Grace, Jas. Wood, Carsley & East Mfg. Co., Thomas Clark & Sons, Woodard & Rees, F. D. Reynolds, E. P. Wilce & Co., Peter Kauff, John L. Diez & Co., Charles Carpenter.

At the meeting March 27, about one hundred representative carpenter contractors and manufacturers met in answer to the call.

Wm. E. Frost was appointed chairman, and R. C. McLean temporary secretary.

Mr. Frost announced that the secretary of the previous meeting was absent, and briefly stated the object of the meeting.

Wm. Hearson, chairman of the Committee of Organization, stated that the object of the association was for the protection of the interests of the craft. It was well known that the contracting carpenters had been at swords' points in regard to cutting of prices. All other trades had organizations, and the carpenters should, as theirs was a large industry. Again, many things are placed in carpenters' specifications that do not belong to them to perform, and an association should be formed to protect them in this and to promote harmony and unity of action. Mr. Hearson concluded by moving that such an association be formed, which was unanimously assented to.

The chair called for the report of the Committee on Organization, which was read by the chairman.

The secretary then read the constitution and by-laws, section by section.

The only important change made from the committee's report was the substitution of \$5 initiation fee for \$15, and the annual dues placed at \$4. The constitution and by laws as finally amended and adopted are as follows:

REPORT OF COMMITTEE.

Mr. Chairman and Gentlemen,—Your committee appointed at a meeting held at this place on Saturday, March 20, 1886, to draft a code of by-laws and constitution for the government of an association about to be organized by the master carpenters and manufacturers of building materials of the city of Chicago, herewith submit for your approval the product of their labors. There have been about 400 postals printed and distributed to the various parties connected with our business.

Yours very respectfully,

WM. HEARSON,
M. CAMPBELL,
WM. GRACE BY WM. HEARSON, } Committee.

PREAMBLE.

We, the master carpenters and manufacturers of wood building materials, of Chicago, for the purpose of uniformity of action in regard to matters involving our mutual interests, do hereby form ourselves into an association and adopt the following constitution and by-laws:

CONSTITUTION.

ARTICLE I. The name of this association shall be the Association of Master Carpenters and Manufacturers of Wood Building Materials of the city of Chicago.

ART. II. Any master carpenter, sash, door and blind manufacturer, or others whose avocation is a part of the above, may become a member. The name of any person wishing to become a member must be submitted in writing, accompanied by the initiation fee, signed by two members of the association, and handed to the board of directors, who will meet every two weeks to consider such applications, and report at the next regular meeting, and be acted upon at said meeting by ballot. Three-fourths of such ballot shall constitute an election.

ART. III. On admission member shall sign the roll, thereby pledging himself to all the rules and regulations of this association. The membership of this association is not transferable.

ART. IV. The officers of this association shall consist of a president, one vice-president, secretary and treasurer; also six directors.

BY-LAWS.

SECTION I. The executive officers shall be elected annually for one year. At the first election, three of the directors shall be elected for two years. Should any vacancies occur in the board of directors, such vacancies shall be filled for the unexpired term at the next regular meeting.

SEC. 2. The president shall preside at all meetings and act as chairman of the board of directors; appoint special committees; approve all bills, and sign them before being paid; direct secretary to mail notice of meetings, countersign certificates of membership, and have the casting vote.

SEC. 3. The vice-president shall preside at all meetings in the absence of the president, and in case of sickness or protracted absence of the president, shall approve bills and discharge his other duties.

SEC. 4. The secretary shall keep a record of all meetings and the accounts of the association in books provided for that purpose; shall give notice of all meetings, collect all moneys, and turn the same over to the treasurer, notify all new members of their election, issue all certificates of membership, and affix the seal of the association thereto; countersign all bills, and do all other duties appertaining to his office or required of him by the president or board of directors.

SEC. 5. The treasurer shall receive all moneys from the secretary, giving a receipt for the same; pay all bills approved by the president and countersigned by the secretary, and render an account of moneys received and paid during the year at the annual meeting or to the board of directors, when called upon to do so.

SEC. 6. Before entering upon their duties, both the secretary and the treasurer shall file with the president a bond of indemnity, payable to the association for an amount, with sureties, as may be approved by the board of directors. At the expiration of their services for the term of their election, they shall turn over all papers, receipts and funds that may be in their possession to their duly qualified successors.

SEC. 7. The board of directors shall have charge of all property of the association not in the hands of the treasurer, and shall fix the compensation of the secretary.

SEC. 8. The president shall appoint, within one week from the election, the following standing committees, each consisting of three members: a committee on membership; a committee on rooms, and a committee on arbitration.

a. The Committee on Membership shall meet one hour before the regular meeting, receive all objections to applicants for membership, and treat such objections as made in confidence.

b. The Committee on Rooms shall have charge of the rooms of the association and see that everything is arranged for the convenience of the same. They shall form a set of rules for the government of members and visitors and strictly enforce the same.

c. The Committee on Arbitration shall take charge of all matters in dispute or difference between members, or members and others, that may be given to them for settlement.

d. The secretary shall act as clerk of this committee. All persons who may desire the services of this committee shall file with the clerk an agreement to submit their case to said committee and to abide by their decision. When such agreement is filed, the secretary shall call a meeting of the committee as soon as possible and convenient to the parties concerned, to hear and decide such controversy.

SEC. 9. The initiation fee of this association shall be \$5, paid in advance. The annual dues shall be \$4, paid quarterly.

SEC. 10. There shall be an annual meeting on the third Saturday of January for the election of officers or any other business that may regularly come before it. Special meetings may be called by the president at any time, and shall be called at the request of any ten members in writing, stating the subject they wish to bring before such meeting. Notice of such meeting and the subject for discussion shall be mailed to each member of the association one week previous thereto by the secretary.

SEC. 11. At the hour of 3 P.M. on the third Saturday of January, the president shall call the members present to order, whose duty it shall be to nominate a member for each of the offices to be filled at the annual meeting, to post the ticket so made in the room of the association, and printed on white paper, at least five days before said meeting. A plurality of votes shall constitute an election.

SEC. 12. Any member who shall neglect to pay his annual dues for the period of three months from January 1, shall be fined twenty-five cents for each month or part of a month he shall so neglect beyond the three months provided for, and until such dues and fines are paid, he shall have no vote, and at the next following annual meeting, if such moneys shall remain unpaid the names of such delinquents shall be publicly announced by the officer in the chair; their name shall be stricken from the roll; they shall not be entitled to any of the benefits of this association, and any interest he or they may have had shall revert to the association.

SEC. 13. Should fraud or dishonorable business conduct be charged against a member, the Committee on Arbitration shall investigate such charge at once and report its findings to the board of directors. If the charge is sustained by evidence, the president shall publicly announce the expulsion of such offending member, and his interest in the property of the association shall terminate. A member who has submitted his case to the arbitration committee and refuses to abide by the decision when made, shall be deemed guilty of dishonorable business conduct.

SEC. 14. Fifteen members shall constitute a quorum for the transaction of business at any meeting. Additions, alterations or amendments to these by-laws may be made by a two-third vote of members at a special meeting called for that purpose, after such proposed additions, alterations or amendments shall have been discussed at the last regular meeting of the association.

SEC. 15. The regular meetings of this association shall be held on the first and third Tuesdays of each month, at 3 P.M.

SEC. 16. The rules of order laid down in Cushing's Manual shall govern the meetings of this association.

Wm. Mavor moved that the roll should be signed and the initiation fee paid before the election of officers, which was carried.

C. B. Bartlett moved that all who wished should be permitted to sign the roll and payment of the initiation fee be postponed until the next meeting, when it would become the first order of exercise. Carried.

It was decided that an adjourned meeting should be held to complete the organization, and Wm. E. Frost was elected treasurer pro tem to receive the initiation fees at the next meeting.

After the signing of the roll by fifty firms, the meeting adjourned to meet at the same place, Tuesday, March 30, at three o'clock.

At the adjourned meeting on the 29th instant, Wm. E. Frost presided. After the reading of the minutes of the previous meeting and their approval, upon motion by Wm. Mavor it was decided that only those who had signed the roll and paid the initiation fee should be entitled to a vote. It was moved by Wm. Grace, seconded by Wm. Mavor, "that section 9 of the by-laws be reconsidered." Mr. Cregay rose to a point of order. He claimed that as the constitution and by-laws had been adopted that they could only be changed according to the rule laid down in the by-laws which called for the posting of the desired change and the call of a special meeting for its consideration.

The chair stated that as this was an adjourned meeting and the object was to perfect the organization, that he thought any change could be made that was thought desirable by the meeting. J. W. Woodard moved to lay the whole matter on the table, which was seconded but not carried. Wm. T. Beal asked the chair what recourse the twenty odd men who had signed the roll at the previous meeting and adopted the by-law as it stood would have in case an alteration was made.

The chair answered that he supposed that they could endorse the action or withdraw as they chose.

After considerable discussion, pro and con, the motion was lost by a vote of 9 to 14.

It was moved by S. H. Demsey, seconded by Mr. Mavor

That considering that names may be signed and fees paid by parties who might not be desirable members of this association, all names of firms or individuals signing and paying fees be referred to a proper committee, and if objections are raised and sustained their fees be returned, and the parties have no further claim on the association.

The motion was carried, and the members proceeded to pay the initiation fee, and those who had not already done so to sign the roll, which showed a total of thirty-eight qualified members.

Nominations being in order it was decided to nominate by acclamation and vote by ballot; a majority of ballots electing.

Murdock Campbell nominated Wm. E. Frost for president, and moved that the secretary cast the ballot for the assembly, which was assented to unanimously.

For vice-president, C. G. Dixon, Wm. Hearson, Wm. Grace and Murdock Campbell were nominated. On the first ballot, Messrs. Grace and Hearson tied, and on the second Mr. Hearson was elected vice-president.

For treasurer, nominees were Wm. Mavor, Murdock Campbell and Peter Kauff; the latter receiving a majority of the votes cast. On motion, the election was made unanimous.

A member suggested that the secretary of the meeting, R. C. McLean, be unanimously elected secretary of the association. Mr. McLean stated that while in a journalistic way, or in any other, he would do all in his power to promote the interests of the association, he could not, in justice to it or to the INLAND ARCHITECT, accept the office.

Mr. Mavor nominated Thos. E. Clark for secretary and moved that the secretary cast a ballot for the assembly, which was assented to unanimously.

For directors to serve two years, Messrs. C. G. Dixon, Wm. Mavor and Wm. Grace were elected.

For directors to serve one year, Messrs. Ira A. Heath, Murdock Campbell and Peter Welter were elected.

On motion, the president, vice-president and secretary were instructed to secure articles of incorporation.

On motion of Mr. Grace, a vote of thanks was tendered Mr. McLean for his services as secretary pro tem.

Mr. Mavor stated that as the INLAND ARCHITECT AND BUILDER gave special attention to the builders interests, he would move that the

INLAND ARCHITECT AND BUILDER be made the official journal of the association, and that members give it the news and their support so far as possible. The motion was carried by a unanimous vote.

The secretary was instructed to send a letter of thanks from the association to Mr. Drake, of the Grand Pacific Hotel for the use of the hall, and the committees on rooms and on constitution and by-laws were discharged with thanks.

The meeting adjourned to meet at the call of the secretary, who would state the place of meeting.

Association Notes.

BUFFALO SOCIETY OF ARCHITECTS.

On the 16th of February the leading architects of Buffalo organized an association with the above title, which will probably do much toward regulating and establishing professional procedure in that city. A constitution and by-laws similar to those of other architectural bodies was adopted. The objects of the society, as set forth in its constitution, being "to unite in fellowship the architects of the city and to combine their efforts so as to promote the artistic, scientific and practical efficiency of the profession, and the cultivation of kindred arts."

The officers elected are: Cyrus K. Porter, president; M. E. Beebe, first vice-president; Geo. J. Metzger, second vice-president; Edward A. Kent, secretary; R. A. Bethune, treasurer.

The charter members of the society include the following architects: George J. Metzger, Cyrus K. Porter, M. E. Beebe, Richard A. Waite, F. W. Humble, W. W. Carlin, F. Caulkins, Henry L. Campbell, Edward A. Kent, Jesse P. Porter, Harry P. Beebe, R. A. Bethune, Louise Bethune, Green & Wicks, Silsbee & Marling, H. H. Little, Swan & Faulkner, Louis Saenger.

The society hold regular meetings on the first Friday of each month.

CHICAGO ARCHITECTURAL SKETCH CLUB.

President Lawrie called the meeting of the sketch club to order to 8:30 P.M., March 29, 1886. The secretary read the minutes of last meeting, which were adopted as read. The report of the committee selected by the sketch club to decide the award of prizes for brick mantel sketches, rendered the following very acceptable decision.

To C. A. S. C.:
GENTLEMEN,—The committee selected by you to award the prizes in the brick mantel competition desires to report as follows: They have carefully examined the designs submitted, and find that many of them have marked merit. Among them they have selected the design marked Red Mortar (by H. Lawrie) for the first prize; Catalogue (by W. J. Williamson) for the second, and Jay (by J. Wechselberger) for the third. The design marked Tail End (by W. J. Williamson) is also worthy of favorable mention.

Very truly yours,

W. L. B. JENNEY, }
L. H. SULLIVAN, } Committee.
JOHN W. ROOT, }

A vote of thanks was heartily extended to this committee by the club. The following communication from the Chicago Anderson Pressed Brick Company was read.

OFFICE OF THE C. A. P. B. Co., CHICAGO, March 29, 1886.

H. LAWRIE, ESQ., President C. A. S. C.:
DEAR SIR,—Enclosed find \$50 to cover the prize offered by us for the best designs of pressed brick fireplace or mantel. With the permission of the club, we will offer another \$50 as a prize for competition for the best design for the main entrance of a large office building, built entirely, except under foot, of Chicago Anderson plain and ornamental brick. If offer is accepted the details of competition is left to the action of the club, our only request being that the designs shall not be less than three-fourths inch scale drawings.
Respectfully,
C. A. P. B. Co.,
per F. L. BLAKE, Secretary.

It was decided to accept the proposition for a second competition on conditions as specified, and the same was favorably received.

Three new members were received into the club, two senior and one junior, as follows: Richard E. Schmidt and F. L. Ellingwood, Senior; and A. C. Berry, Junior.

The evening was then devoted to sketching a down-spout head, in which many different forms of the griffin and many very neat sketches were presented. In the tombstone competition a number of acceptable sketches were handed in. The next meeting, April 12, will be occupied by George Beaumont, who will read a paper on brick-work.

MILWAUKEE SKETCH CLUB.

The club now numbers about twenty-five, and is in a flourishing condition, the meetings being well attended and interesting. At the last meeting, several architects and honorary members were present, and spoke highly of the work of the club. The present programme is a discussion on brick-work; essay on the life of a draughtsman; how to figure bills of quantities of building materials; competition, design for the side of a library, including mantelpiece and bookcase combined, for a medium priced house. The junior work is a few designs for porches.

COLUMBUS BUILDERS' EXCHANGE.

The Columbus Builders' Exchange was organized Saturday, March 27, at a meeting held in the office of Architect H. A. Linthwaite, and was well attended by the builders and architects of the city. The following officers of the exchange, which has been incorporated, were elected: William Slade, president; J. B. Coulter, first vice-president; W. H. Fish, second vice-president; Messrs. Beekey, Wilcox, Carlile, Krauss, Fink, Fish, Hildreth and Hagerty were elected directors. George B. Parnele, secretary of the Columbus Brick and Terra-cotta Company, was elected secretary, and E. A. Hildreth treasurer by the board.

This enterprising organization grew out of the enterprise of the Columbus builders and material men, largely aided by the board of trade. Shortly after the organization of the board of trade in the summer of 1884, President Miles and Secretary Lord visited Cincinnati, and their investigations there into the workings of the board of trade and chamber of commerce brought them in contact with the Builders' Exchange, a large and influential body of contractors, builders and real estate men associated together for their mutual protection and advancement, and having inti-

mate relations with the board of trade. That organization impressed them very favorably, and on returning to Columbus the president and secretary brought the matter before the directors of the board at Columbus, and the contractors, architects and builders were stirred up on the question of organizing such a body. It has been agitated more or less ever since, and within the past two or three months Messrs. William H. Fish, W. H. Ferguson, W. H. Slade and others pushing together have brought about this organization, which has already been incorporated, and will no doubt become one of the fixed and useful associations of the city.

OHIO MECHANICS' LIEN LAW COMMITTEE.

Ohio material men, mechanics and laborers, appointed a committee in January last (Messrs. W. H. Fish, C. E. Morris, D. W. Kelly, W. H. Ferguson and O. B. Thompson), to report upon amendments to the mechanics' lien law. To this committee the Association of Ohio Architects, at their last meeting, added four architects, Messrs. Harris, Linthwaite, Kremer and Morris, to assist this committee in the work. The amendments were prepared and the bill has been read before the state legislature and ordered printed, and we have private information which leads us to strongly believe that the law is generally well thought of and will be passed and become law without opposition. A general attendance of parties interested was called, and met at the city hall, at Columbus, on the evening of March 15th, to hear and consider a report of progress by the committee in charge.

MINNEAPOLIS BUILDERS' EXCHANGE.

A large gathering of builders, architects and contractors assembled at the permanent exhibit rooms, at Minneapolis, for the purpose of reviving and re-organizing the old builders' exchange, and considerable enthusiasm was developed. The following officers were chosen: B. C. Hurd, president; P. B. Woodlief, secretary; W. W. Sly, treasurer; B. C. Hurd, W. W. Sly, W. R. Griffith, C. W. Davidson, G. W. Libby, L. C. Bisbee, Fred Kees and W. H. Dennis, executive committee. Meetings will be held each day from 11 to 12 o'clock.

New Publications.

THAT excellent sanitary journal, the *Sanitary News*, of Chicago, has commenced issuing a daily edition. It is four pages in size. This journal, the regular weekly edition of which is one of the best authorities upon sanitation in this country, in fact but one, and that published in the East, possessing any claims for superiority, should have a place in every architect's library. Its editorial matter is always authoritative, and with its daily edition it will be able to keep its subscribers thoroughly posted on the sanitary news of the day.

THE *California Architect and Building News* deserves considerable praise from the profession. It has had, like the pioneer, many things not encountered by other journals of its class to contend with, and its results, like all pioneer work, may have been somewhat crude, but there is little doubt in regard to its effectiveness, judging from the designs for buildings published of late, and the vast improvement in the typographical appearance and enlargement of the journal's pages, which indicate that it is prosperous. We have a decided feeling of sympathy and friendliness for journals that are honestly and earnestly endeavoring to truly benefit those from whom they draw their support, and are able to forget their own personalities in their work of advice, direction and encouragement. This, under its new departure, our California contemporary is evidently doing. The architects of the Pacific coast, and, as far as they can, all architects should give them practical encouragement. Theirs is, perhaps, outpost duty, but none the less deserving of praise; but there is no reason why, with its wealth and natural advantages, the Pacific slope should not become famous for its architecture, and this journal be a powerful agent in its upbuilding.

THE March 6th issue of *Building* contains the second paper on "Slow-Burning Construction," by W. H. Dabney, Jr., architect to the Mutual Factory Fire Insurance Companies, of Boston; the continuation of Mr. Warren R. Briggs' excellent series of articles on "The Planning and Construction of School Houses," with plans and perspectives of a model suburban school. Mr. Wm. B. Tuthill, architect, continues the discussion, in his articles on the "City Residence, its Design and Construction," of various plans for apartment houses, including what is known as the Duplex System. Various plans of apartment houses are given in the text. Mr. J. Pickering Putman, well known through his "Lectures on the Principles of House Drainage," speaks of the necessity of thorough ventilation for soil-pipes and waste-pipes, and of the evils and objections to special trap ventilation in his article on "Improved Plumbing Appliances." There is also an illustrated article on the street memorial in the royal courts of justice, London, a book review department, the weekly report on the real estate market, a trade supplement reviewing the industrial progress, and a four-page supplement of the building news of the week, besides editorial comments on the topics of the day. In the illustrations, sketches are given for small laborers' cottages, for a country church, details of a staircase hall for a city house, finished in oak, and the perspective view and plans of the new clubhouse for the Elmira Athletic Association.

THE plans for the Bethesda hotel, to be erected at Waukesha, are rapidly progressing in Architect Boyington's office, and will be completed in time for dedication July 4. It will be located right at the Bethesda Spring, in the park. It will be of frame, and with its tower features, gables and broken sky-line, will be a great ornament of the landscape, much more so than the Fountain Springs hotel. It will be 350 feet long, and will have 150 private guests' rooms, besides servants' department, dining rooms, parlor and other public rooms. So well arranged is the building that this wing can be cut off for a winter hotel, as well as serve an admirable part for summer guests. Figures will be taken on the building directly, and fully \$75,000 will be expended.

Mosaics.

P. P. COOKINGHAM and Herbert Clarke are a new firm of architects doing business at 74 Metropolitan block.

THE Illinois Terra-cotta Lumber Company have secured the sole right for the use of Hawley's patent improved fireproof construction for the state of Illinois.

ARCHITECT A. BAUER, who is making an extended tour through Europe, when last heard from was in Rome. Mr. Bauer writes that he thinks more of Chicago every day, and that he will soon again return.

A. G. MURRAY is placing the plumbing in the residence of Mr. Reed, at Lake Forest, Illinois. One feature in the plumbing is eight back-outlet bowes, made by Huber & Co. of New York. The work is described as being exceptionally fine. Cobb & Frost are the architects.

W. E. HINCHLIFF & Co. have recently contracted to furnish 125,000 pressed bricks, to be used in the erection of the school building at the corner of York and Laflin streets; also 30,000 pressed bricks to Napoleon Provst, to be used at the corner of Madison street and Center avenue.

PLANS are being prepared by architect Scott, of Ottawa, Canada, for a depot for the Grand Trunk Railway of Canada at Montreal. The building has been projected for a number of years under an agreement with the city of Montreal, and under this agreement must be finished by the end of 1887. The depot will cost upward of half a million of dollars.

MR. JOHN R. SCOTT of the hardware firm of Kellogg, Johnson & Bliss, was married, on the 9th of March, to Miss Christina Boyd, of Plainfield, New Jersey. The wedding took place at the residence of the groom's brother, Mr. Walter Scott, 124 East Front street, Plainfield, a gentleman widely known throughout the country in the printing-press business, and the nuptial knot was tied by Rev. T. Logan Murphy.

MINNEAPOLIS is to have a new twelve-story hotel, The Palisades. The main dining-room and private banqueting rooms will be in the tenth story, and will excell in finish any rooms used for similar purposes this side of New York. The eleventh floor will be devoted entirely to the kitchen and its accessory departments, and the twelfth story contains the laundry and servants' quarters. It will have accommodations for five hundred guests and will cost \$750,000.

HAY & PRENTICE Co., the steam-heating firm of Chicago, have fitted up a suite of elegant offices in the Commercial National Bank building, corner Dearborn and Monroe streets, for the accommodation of architects and their clients. This firm is now manufacturing an improved radiator, and have taken the agency for a wrought iron boiler of English manufacture, which does not materially exceed in cost those of cast iron, samples of which, together with their other specialties in the steam and hot water heating line, are exhibited at the down town office.

MR. E. H. SHELDON will build, after plans by Architects Burling & Whitehouse, a first-class seven-story business block at Quincy street and Fifth avenue, to cost \$75,000. The block will be constructed in the most solid manner, of Lake Superior variegated sandstone and St. Louis brick, and made thoroughly fire-proof by the Wright Fireproofing Co. All girders of the building will be of iron, covered with the fire-proofing material, concealing the same. The building will be chastely severe and strict in style. There will be two elevators, a passenger and a freight, the staircases will be iron, and the interior will be furnished in a superior manner.

FREQUENT paragraphs like the following are going the rounds of the press:

One of the most noticeable features of the winter building—especially to a stranger—is the fact that great roofs are built under which the Chicago worker in stone puts in a foundation as securely with the thermometer 15 degrees below zero as he could during the summer weather. As was stated at one of the banquets last week, "this is a Chicago feature in building, and nothing can stop her progress."

All of which is good and true but why does not the truthful scribe give all the facts, which would include the statement that Architects Burnham & Root introduced the method, as far as Chicago is concerned, and are deserving of proper credit for, as Architect Adler said recently, making two blades of grass grow where one grew before.

THE Eclipse Furnace Company have completed a building for their factory at Hermosa (formerly known as Garfield), a few miles from the center of Chicago, on the C. M. & St. P. Ry. The factory is located on Tripp avenue, 50 by 110 feet, two stories high, and 100 men are employed. The Chicago, Milwaukee & St. Paul Railroad Company have commenced at this place an elegant new depot, 20 by 60 feet, two stories high. The facilities for shipping afforded this company are incomparable, as the factory is on the main line of this railroad, and side-tracks permit the shipment of their product without rehandling. The Eclipse furnace is one of the best as well as economical in the market. The city office of the company is at 81 Dearborn street.

GERMAN competition in the lock trade, says an English contemporary, is becoming increasingly severe. At present it shows itself chiefly in the brass cabinet branch, which is devoted to the production of locks used mainly upon all descriptions of furniture. The Germans are meeting with especial success in the London market, where their goods are much appreciated by buyers, numbers of whom will not have the English articles of similar style even when they can be had at the German prices. The style and finish of the German goods are very attractive, and their prices have hitherto been below those of the English locks. It was on account of their prices that they first obtained a footing in England, and now that English makers are beginning to sell at the Continental prices the German goods are maintaining the hold they have got on account of their excellence. The Continental locks are machine made, and complete in every part. Wolverhampton and Willenhall lock makers are becoming seriously concerned at the direction which the market is taking, and by the adoption of machines and hand-worked processes certain firms are now turning out some of the goods at the German prices, and are working to German pat-

terms. To assist in bringing about this result, they have, however, had to considerably reduce wages, and during the past two or three years wages have fallen altogether some 15 or 20 per cent, and it is considered likely that a further reduction will have to be enforced. Even with their presses it is not at all easy for the English manufacturer to imitate German finish; and it is clear that unless some more decided steps are taken the Germans will have a considerable slice of the English trade.

BRONZE gates for the Vanderbilt mausoleum, designed by Architect Richard M. Hunt, of New York, are being made by the Henry Bonnard Bronze Company. There are to be twenty-two double and two single gates, six of the former being each 9 feet 8 inches tall, 6 feet 4 inches wide, and sixteen 8 feet 6 inches square. The two single gates will be 7 feet 8 inches by 3 feet 4 inches. In addition to these there are sixteen lantern guards and frames with glass work 7 feet high and 4 feet wide. Upward of 38,000 or 40,000 pounds, or nearly twenty tons of standard bronze and phosphor bronze, will be used in their construction, including heavy sockets and bolts by which they will be hung and riveted in position. A separate mold is required for each piece, both large and small, no matter how many times reproduced. Although the workmen were all imported from Europe for this class of work, and were selected from the celebrated bronze foundries of Barbedienne and Thiebaut Freres, of Paris, the utmost care must be taken with every casting, as they are required to be free from crack or blemish of any kind. The designs are the old wrought hinges of the thirteenth and fourteenth centuries. The architect personally inspects each piece as soon as cast, and his approval after such examination is necessary before it can be sent to the finishing-room. The first of the double gates has just been cast. It is the largest single bronze casting of that character ever made in this country, and probably in the world, and is a marvel of workmanship. It will require the services of a dozen men at least a month after the masonry of the mausoleum is finished to put up the bronze work. After it is completed it is claimed that so far as this part is concerned the mausoleum will be practically burglar-proof. The cost of the gates will approximate \$60,000.

Wood Mantels.

AN exhibit of much merit and extensive proportions and varied styles, in the line of wood mantels, is something which would have been a decided novelty in Chicago, but, through the enterprise and skillful work of such firms as the C. J. L. Meyer & Sons Co. the public cannot only procure these comparatively cheap and yet incomparably rich and effective additions to the interior finish of their homes, but are able to choose from hundreds of styles and varieties of woods just the mantel they may fancy or their purse allow. Evidencing this, the magnificent show-rooms lately fitted up for the especial purpose of exhibiting wood mantels, grates and tiles by the company mentioned, at 133 and 135 Wabash avenue, are daily thronged with visitors. Not only are seen architects with their clients, but ladies who wish to remodel their houses, gentlemen who contemplate building, and not a few who, with no desire to purchase, but through a pure love of art, pass over the richly carpeted floors, wander through aisles between the rows of richly carved and handsomely polished marvels of the woodworker's art. Here and there novel pieces of metal or bisque bric-a-brac enrich and add a harmonious completeness to the general effect, while plate-glass mirrors reflect and bright brass enlivens the view from room to room. On the floor below is found so large a quantity of all styles, shapes and qualities of tiling that the visitor must perforce stop to wonder where all the talent and manufacturing ability was found to produce such marvels of ceramic art. The C. J. L. Meyer & Sons Co. have moved their former show-rooms to this locality, so that architects and their clients, as well as other visitors from city and country, may find them always accessible, as they have always been desirous to please.

Synopsis of Building News.

Amboy, Minn.—Architect Geo. Pass, of Mankato, Minn., reports: For Odd Fellows' Society, two-story brick and stone building, 24 by 60 feet; cost \$3,000; projected.

Aurora, Ill.—Building outlook is fair. There seems to be very strong competition among builders, all seem anxious to get the first contracts, and are building very low.

Architect J. Mulvey reports: For J. M. Short, two-story and basement brick and stone store building, 21 by 60 feet; cost \$3,700; under way; L. H. Waterhouse, mason; E. D. Briggs, carpenter. For Wm. Cooper, two-story frame dwelling, 28 by 46 feet; cost \$3,500. For John Reiley, two-story and basement brick and stone store building, 22 by 80 feet; plans not yet completed.

Architect W. L. B. Jenney, of Chicago, reports: For C. L. Hoyt, two-story and basement frame residence, 38 by 52 feet; cost \$7,000.

Architects Edbrooke & Burnham, of Chicago, reports: For Royston Bros., two-story brick and terra-cotta store and flat building, 50 by 80 feet; cost \$16,000.

Austin, Ill.—Architect J. H. Carpenter, of Chicago, reports: For H. E. Hunt, five two-story ten-room frame houses; cost \$12,500; projected.

Beloit, Wis.—Architects Cobb & Frost, of Chicago, Ill., report: For John R. Adams, frame residence; to cost \$20,000.

Blue Island, Ill.—Architect C. H. Gottig, of Chicago, reports: For John Engelhard, frame hall building, 50 by 72 feet; cost \$7,000; H. Krueger, contractor.

Brenham, Texas.—Architect N. J. Clayton, of Galveston, Texas, reports: For Mrs. R. E. Graver and R. R. Kruger, two-story brick building, tin roof; cost \$4,000; projected.

Breyns, Ohio.—Architects Kendrick & Shrimpton, of Ft. Wayne, Ind., report: For Mrs. Hassinger and P. Osman, brick residence; cost \$5,700.

Buffalo, N. Y.—Architect R. A. Bethune reports: Addition to Homeopathic Hospital, corner Twelfth and Maryland streets, to cost \$8,000; Charles Berrick, contractor. For David S. Bennett, brick stable, to cost \$4,000; Charles Berrick contractor.

Architect George J. Metzger reports: For John Keenan, three-story brick store, corner Niagara and Virginia streets, to cost \$12,000; Charles Berrick and Stephen Reimann, contractors. For John Mesmer, brick livery stable, to cost \$15,000; Rumrill & Rupp and Joseph Metz, contractors. For Jacob Dold, six-story brick pork-packing establishment; to cost \$30,000; Henry Schaefer and Stephen Reimann, contractors. For Louis Goetz, frame residence, to cost \$4,000; Jacob Hasselbeck, contractor.

Architect Edward A. Kent reports: For Charles E. Williams, frame residence, to cost \$3,000; Hoffmeyer & Goetz, contractors.

Architect H. H. Little reports: For J. J. McWilliams, brick residence, to cost \$25,000; Rumrill & Rupp, contractors. For H. L. Taylor, brick stable, to cost \$6,000; Rumrill & Rupp, contractors.

Architect Charles R. Percival reports: For George Dickman, frame residence, to cost \$5,000; Oliver A. Jenkins, contractor.

Architect W. W. Carlin reports: For Frank J. Abel, frame residence, to cost \$3,000; Louis Bieber, contractor. For Jabesh Harris, brick soap factory, to cost \$4,000; Rumrill & Rupp, contractors.

Architects Bayer & Paul report: For Mrs. P. McNorton, frame residence, to cost \$4,000.

Architects C. K. Porter & Son report: For William Illingworth, frame residence, to cost \$5,000; C. J. Close, contractor.

J. L. Telford reports: For C. H. Seymour, frame residence, to cost \$2,500; Oliver A. Jenkins, contractor.

Jacob Hasselbeck reports that he is building the following: For Conrad Klemm-frame store and dwelling, to cost \$2,500. For Robert Oehmig, brick store and dwelling, to cost \$2,500. For the Union Steamboat Company, freight shed, to cost \$12,000.

Bureau, Ill.—Architect H. Boehme, of Joliet, Ill., reports: For the Chicago, Rock Island and Pacific R. R. Co., depot; cost \$2,000; contract not let.

Butte City, Mont.—Architect C. H. Gottig, of Chicago, Ill., reports: For Samuel Word, pressed brick, granite and terra-cotta residence; to cost \$38,000.

Cadiz, O.—Architect Chas. P. Harrison, of Wheeling, W. Va., reports: For Harrison National Bank, two-story bank building, 44 by 36 feet, stone foundation and trimmings, ornamental brick cornice, granite entrance porch; cost \$12,000; under way; A. W. McDonald, of Pittsburgh, Pa., builder.

Carey, Ohio.—Architect F. K. Hewitt, of Tiffin, Ohio, reports: For Henry Fetter, three-story hotel and store building, 98 by 80 feet, brick, cutstone and terra-cotta, tin roof, steam heating, tile floor, electric bells, grates and wood mantels; cost \$24,000; under way; Brown & McGowan, builders.

Cedar Rapids, Iowa.—Architect J. H. Carpenter, of Chicago, reports: For Dan O'Hara, six dwellings, 25 by 50 feet; cost \$5,000 each; projected.

Chattanooga, Tenn.—Following is the amount of building done in this city during the year 1885: Stone store building, 1; cost \$75,000; brick and stone store buildings, 4; cost \$239,500; brick store buildings, 14; cost \$755,000; brick school buildings, 4; cost \$172,000; stone church, 1; cost \$50,000; brick churches, 6; cost \$127,000; brick hotel, 1; cost \$5,000; factory buildings, 12; cost \$220,000; stone residence, 1; cost \$35,000; brick residences, 10; cost \$50,000; frame residences, 254; cost \$268,000; total 308 buildings; cost \$1,217,000; total, 1884, 404,700. The following buildings are under way, or plans are being made: Brick stores, 4; cost \$100,000; brick hotel, 1; cost \$75,000; brick residences, 2; cost \$8,000; brick churches, 2; cost \$40,000; frame dwellings, 40; cost \$50,000.

Cheboygan, Mich.—Outlook is good. Plans have been prepared for a number of buildings, but capitalists seem inclined to wait until the labor question assumes a more settled form.

Architect Joseph Cochran reports: For Dr. A. M. Gerow, three-story double store building, 52 by 108 feet; cost \$15,000; drawings under way.

Cheyenne, Wyo.—Prospects for a building boom look very good, to say the least. The following buildings seem to be assured facts: \$150,000 capital at Cheyenne; \$50,000, depot U. P. R'y. Co. at Cheyenne; \$50,000, hotel at Cheyenne; \$50,000, institute at Laramie City; \$30,000, insane asylum at Evanston. Plans and specifications for depot are here, and work is expected to begin shortly. There are many cheap dwellings and additions under way now, and prospects for Cheyenne this season look bright indeed.

Chicago, Ill.—The uncertainty which has existed for some time in regard to the outcome of the eight hour movement is about over, and while the probability still exists that several of the trades will ask that eight hours shall constitute a day's labor, and that ten hours' pay will be asked before the end of the season, it is extremely probable that this demand for increased wages will not be made before present contracts are executed. The general feeling is that neither contractors or employees can afford a strike.

Architect W. L. B. Jenney reports: For Wm. M. Hoyt & Co., designing new office and fittings for their wholesale building on River street. Office fittings for Barrett & Kimball, corner of La Salle and Randolph streets. Also for Bogue & Hoyt's new office in the Howland Block. Plans made for a block of two three-story and basement residences, 56 by 65 feet, on Ashland avenue, rock faced and cutstone front; cost \$20,000; contract not let. For Wm. Penn Nixon and Dr. O. W. Nixon, two three-story and basement cutstone front houses, at the junction of La Salle and Clark streets, opposite Lincoln Park; cost \$8,000 each.

Architects Treat & Foltz report: For E. E. Crepin, three-story and basement, Indiana pressed brick and stone and terra-cotta residence, 46 by 56 feet, on Woodlawn avenue, between 47th and 48th streets; cost \$22,000; Edmunds & Hay, carpenters; J. G. Dietz, mason; J. Furst & Son, cutstone; Martin Moylan, plumber; J. B. Sullivan & Bro., painters.

Architects Adler & Sullivan report: For Martin Ryerson, six-story and basement store building, 50 by 170 feet, on Adams street, between Franklin and Market streets; front to be of granite, iron and glass; cost \$30,000.

Architects Addison & Fiedler report: For Wm. E. Hinchliff, two two-story dwellings, 46 by 55 feet, at 502-504 Jackson street, Indiana pressed brick, stone trimmings; cost \$10,000; under way.

Architects Holabird & Roche report: A hall of natural science to be erected in connection with the Northwestern University at Evanston, brick and stone, extensive laboratories to be fitted up; cost \$40,000.

Architect H. M. Hansen reports: For A. Olsen, nine two-story and attic stone front dwellings, 170 by 75 feet at 157 to 175 Eugene street; cost \$60,000. Also, three two-story and attic dwellings on N. Wells street, same as above; cost \$16,000. For Adolph Holsen, three two-story and cellar dwellings on N. Franklin near Division street; cost \$15,000.

Architect Wm. Thomas reports: For Alex. Bell, two-story and attic dwelling at 3238 Wabash avenue, pressed brick, brownstone and terra-cotta, hardwood interior finish, all modern improvements; cost \$7,000; under way; Chas. Farr, contractor.

Architect H. S. Jaffray reports: For E. Pendleton, two-story and attic residence, 25 by 79 feet, on Calumet avenue near Thirty-third street, Bedford rock-faced stone front; cost \$10,000; under way. For Philo Allen, two-story Bedford rock-faced stone front residence, 23 by 56 feet, on Prairie avenue near Thirty-third street; cost \$6,000; under way. For Joseph Swart, three-story store and flats, 25 by 44 feet, on Ogden avenue near Jackson street, pressed brick front; cost \$7,000. For Geo. F. Harding, two additional stories to office building at 155 and 157 Washington street; cost \$8,000.

Architect W. L. Carroll reports: For A. C. Graham, two-story and cellar pressed brick residence, 20 by 50 feet, on Bowen avenue near Drexel boulevard; cost \$3,000; contract not let. For Chas. H. Smith, two-story and attic and cellar pressed brick residence, 24 by 46 feet, on Leavitt street near Congress; cost \$4,000; contract not let. For O. B. Mullen, three three-story brownstone front dwellings, 50 by 80 feet, on La Salle avenue near Division street; cost \$16,000.

Architect L. B. Dixon reports: Letting contracts for the Michigan avenue M. E. Church, to be erected on corner of South Park avenue and Thirty-third street, of Fox Hill (Pa.) granite; cost \$80,000. For Baker Bros., four-story brick factory building, on Fifteenth street near State; cost about \$12,000; Alex. White, carpenter; Geo. Lehman & Son, masons. For G. L. Hamlin, three-story residence, to be built of rock-faced limestone, black slate roof, red slate for roof of bays; cost \$10,000; Jos. Philipson, carpenter; M. Kagan, mason.

Architects Bauer & Hill report: For Henry Gauder, three-story flats, on Lincoln avenue; cost \$8,000; contracts let; also, a \$60,000 panorama building at Kansas City, Mo., described in Kansas City *Venus*.

Architect J. H. Carpenter reports: For J. W. Thomas & Son, four three-story and basement flats, 75 by 76 feet, on South Sangamon street, Anderson pressed brick, with Marquette stone trimmings; cost \$25,000; under way. For Robert C. Butzow, three-story flat building, 25 by 70 feet, Anderson pressed brick, Marquette stone and terra-cotta trimmings; cost \$8,000; contracted. For Mrs. J. H. Surbridge, pressed brick and stone residence, 25 by 50 feet, on Lake Park avenue; cost \$4,500; projected. For John B. Jeffrey, six-story office building 50 by 90 feet, on Third avenue, Anderson pressed brick; cost \$50,000; projected; also, additions to residence and stable for same, on South Park avenue. For Mr. Garrity, four brick residences 75 by 70 feet, on Centre avenue, three-story; cutstone fronts; cost \$16,500; projected.

Architect C. A. Weary reports: For R. M. Cameron, three-story and basement pressed brick and stone store and flats, 25 by 70 feet, at 241 South Halsted street; cost \$8,600. For J. L. Campbell, six two-story and cellar dwellings, 134 by 54 feet, on Warren avenue, pressed brick, galvanized iron trimmings; cost about \$30,000. For O. M. Wells, sixteen two-story and cellar dwellings, 335 by 66 feet, on Prairie avenue, near Thirty-ninth street, pressed brick and stone fronts; cost \$80,000; under way; C. W. Boyington, contractor. For James Dunn, two three-story stores and dwellings, 50 by 90 feet, on West Jackson street near Halsted, pressed brick fronts, stone, terra-cotta and galvanized iron trimmings; cost \$17,500; contract not let. For same, two three-story

and cellar flats, 46 by 65 feet, pressed brick and stone fronts; cost \$11,000; contract not let. For J. L. Campbell, six two-story and cellar dwellings, 120 by 50 feet, on West Congress street, pressed brick fronts; cost \$30,000. For same, four story stores and flats on corner of Harrison street and Campbell avenue, pressed brick and stone front; cost \$9,000; not let. For same, five two-story pressed brick and stone front dwellings, 21 by 36 feet, corner of Campbell and Racine avenues; cost \$18,000. For C. F. Holman, four brick cottages, 22 by 37 feet, on Kedzie avenue; cost \$6,400. For Heaton Owsley, two-story flats, 50 by 50 feet, corner of Hoyne avenue and West Adams street, Indiana pressed brick and Carbondale brownstone fronts; cost \$7,500.

Architect P. W. Reuhl reports: For P. Brennan, double three-story brick and stone store and flat building, 595-597 West Twelfth street; cost \$14,000; Conrad Kies & Son, contractors. For A. Geringer, two-story and basement and attic store and flats, 32 by 65 feet, pressed brick and stone, steam heat; cost \$9,000. For C. F. Wooly, double four-story and basement brick and stone store and hall building, 48 by 80 feet; cost \$20,000; contracts let. For G. Gegenworth, three-story store and flats, Twelfth street near Western avenue, pressed brick and stone trimmings; cost \$7,500. For M. Merhoefer, three-story and basement store and flats, Blue Island avenue and Twelfth street, pressed brick and stone; cost \$8,000. For Mr. Hoffman, double stores and flats, 48 by 50 feet, on Centre avenue and Thirteenth place.

Architects Cole & Dahlgren report: For Mrs. Geo. Dingee, two-story frame dwelling with brick basement, 24 by 45 feet, on Paulina near Wilson street; cost \$3,000. For L. B. Wood, two-story frame dwelling, 26 by 44 feet, on Paulina near Leland street; cost \$3,000. For F. A. Bishop, frame cottage, 24 by 41 feet, on Paulina near Leland street; cost \$2,000. For Hilpert & Chandler, frame cottage, 24 by 41 feet, on Leland street near Ravenswood avenue; cost \$2,000. For same, cottage, on Leland street near Ravenswood avenue; cost \$1,800. For Mr. Millberg, two-story cottage, 24 by 42 feet, on Ashland avenue near Sunnyside; cost \$2,500. For A. J. Bickman, cottage, on Paulina near Lawrence avenue; cost \$2,000.

Architect John H. Wagner reports: Preparing plans for alterations in the room occupied by the Merchants' Loan and Trust company, in the Portland block; to cost \$20,000. The main entrance to the bank will be on Washington street. New counters will be put in and the room redecorated. The three-story store and flat building being erected at the corner of Madison and Curtis streets by Samuel Kirkwood, is rapidly nearing completion and the stores will be ready for May renting. The Meyer-Sniffen Co's Hellyer water-closets are used. P. Nacey is doing the plumbing.

Architects Ostling & Bourgeois report: For J. D. Everett, two-story stone front residence, 25 by 66 feet; cost \$8,000; under way. T. L. Whalen, carpenter; J. Lacroix & Co., masons.

Architect Geo. Beaman reports: For Mrs. Barbe, two-story and basement brick and stone residence, 28 by 66 feet, on South Park avenue; cost \$8,000; contract not let.

Architect Thos. H. Harrison, of Richmond, Ind., reports: For Morrison & Plummer, pressed brick laboratory building, 85 by 68 feet, on Clybourn avenue; cost about \$5,000; under way.

Architect August Bessler reports: For Fred. Matt, three-story and attic store building, 26 by 66 feet, corner of May and 20th streets, Indiana pressed brick; cost \$7,000; under way. For Peter Steimer, three-story and attic building, 22 by 40 feet, at 104 Mather street, Indiana pressed brick; cost \$3,500; under way. For P. Gallagher, three-story building, 26 by 80 feet, at 381 W. Polk street, St. Louis pressed brick; cost \$8,500; under way. For Conrad Kolb, three-story flat building, 27 by 66 feet, on Green street, St. Louis pressed brick, Lemont stone trimmings; cost \$5,800; under way. For Mr. Nicholson, two-story and basement dwelling, 26 by 50 feet, on Humboldt boulevard, Anderson pressed brick; cost \$4,000; under way. For J. W. C. Nehf, two-story frame house, 22 by 68 feet, in Lake View; cost \$3,000; under way. Also three small cottages, to cost less than \$2,000 each; under way.

Architect P. W. Alexander reports: For Geo. Welterhead, three-story and basement pressed brick front store and flats, 46 by 56 feet; cost \$8,000; under way. For John Nielson, seven two-story and cellar dwellings, 35 by 22 feet; cost \$1,600 each; plans under way.

Architects McAfee & Lively report: For H. G. Brooks, on Warren avenue, near Robey street, remodeling cottage; cost \$2,500.

Architect L. G. Hallberg reports: For Geo. P. Brann, block of stores and flats, 100 by 75 feet, on corner of Wells street and Chicago avenue, pressed brick and stone fronts; cost \$35,000. For George Seaverns, twelve two-story and cellar dwellings, 160 by 35 feet; cost \$40,000; contract let. For A. L. Kraft, two-story store and flat, 23 by 90 feet, on North Clark street; cost \$5,000; contract let.

Architect J. W. Ackerman: For John Pierer, two-story and basement cutstone front residence, 25 by 76 feet, on Michigan avenue; cost \$12,000. Also a residence for Hugh Templeton, to be erected on the west side; plans made.

Architect S. M. Randolph reports: For H. C. Durand, four-story stores and flats, on northeast corner of Clark and Indiana streets, Indiana pressed brick, with terra-cotta, copper and gvanized-iron trimmings; cost \$30,000.

Architect I. C. Zarbell reports: For S. A. Wheeler, two-story double residence, to be erected on Warren avenue, near Francisco street, pressed brick and stone fronts; cost \$6,000. For Benj. Summer, four-story store and flats, on Van Buren near Paulina street, brick, with stone trimmings; cost \$12,000.

Architect Julius Speyer reports: For Gage, Sullivan & Co., double two-story store and flats, 50 by 100 feet, Chicago avenue, near Wells street, pressed brick and stone front; cost \$15,000. For Town of Lake, two-story and basement brick and stone school building, 70 by 80 feet, heated by steam; cost about \$25,000; contracts let; also, school-house, 80 by 90 feet, brick stone trimmings, slate mansard roof; cost about \$40,000. Have made a contract with C. L. Jenks for four tenement buildings, in different localities on the South Side, at an aggregate of \$75,000, to be commenced May 1; plans under way. For Robinson & Vannetta, two-story and basement lively stable, 57 by 130 feet, on Thirtieth street, near Cottage Grove avenue; cost \$18,000. For Henry Kostens, four-story and basement store and flats, 27 by 60 feet; cost \$3,000. For Martin Adler, two-story and basement flats, cost \$5,000. For George Montgomery, two-story and basement flats on Winchester avenue near Adams street; cost \$7,000. For Falkner & Stern, four-story and basement store building, 50 by 90 feet, at 287 and 289 West Madison street, Marquette and Portage brownstone front, heated by steam, passenger and freight elevator; cost \$25,000. For himself, Mr. Speyer is erecting a brick and wood residence, 25 by 62 feet, on Burling street, near Fullerton avenue, heated by steam. For D. Ward, three-story and basement factory building, 50 by 160 feet, on Clinton street, near Adams. For M. Keller, two-story dwelling on Laffin street, near Spruce; cost \$6,000.

Architect John H. Warner, reports: Residence for W. J. T. Brooks, to be erected on Congress street, near Centre avenue; cost \$12,000.

Architect Fred Kettermich, reports: For W. H. Denhard, flat building to cost \$5,000, to be built at 1020 West Twelfth street.

Architect F. Baumann reports: For E. A. Matthiesen, two-story and attic and basement dwelling, 41 by 72 feet, on Dearborn avenue near Burton place, Trenton pressed brick, brownstone trimmings, copper bays and cornice, all modern improvements; cost \$43,000. For C. J. Barnes, three-story and cellar, pressed brick and brownstone, double store and flats, 48 by 56 feet, on Thirty-first street near Wabash avenue; cost \$10,000; bids all in.

Architect J. J. Donelan reports: For Hammill & Jordan, double store and flats, at 641 West Polk street; cost \$12,000.

Architect O. J. Pierce reports: For E. G. Dunn, one-story frame cottage, 22 by 48 feet, at 527 Burling street; cost \$2,000. For J. W. Van Berschoot, two-story and sub-cellar flat building, 24 by 60 feet, on Warren near California avenue, pressed brick and stone; cost \$5,000; W. H. Iliff, mason. For F. P. Owings, five-story store building, 42 by 150 feet, on Franklin street north of Jackson, brick, stone and iron construction; cost \$30,000; contracts being let.

Architect S. V. Shipman reports: For T. S. McClelland, three-story residence, at 417 Superior street; cost \$10,000.

Architects Wm. Strippelman & Co. report: For John Rueter, four-story flats, 40 by 100 feet, at 356-358 West Twelfth street, Anderson pressed brick front; cost \$20,000; Peter Kauff, carpenter; Conrad Kies & Son, masons. For Conrad Seipp, four-story and basement pressed brick warehouse, 80 by 140 feet, at 257 to 263 Franklin street; cost \$30,000; under way; John L. Dietz & Co., carpenters; Henry Appel, mason.

Architect A. Cudell reports: For P. Schoenhofen Brewing Co., three-story and basement building, 66 by 100 feet, at Eighteenth street and Steward avenue, pressed brick, stone and terra-cotta, fire-proof; cost \$65,000; Rossler and Winkler, masons.

Architect W. W. Clay reports: For H. Weigley, residence; to cost \$20,000; at north-east corner of Jackson and Laffin streets.

Architect H. F. Kley reports: For Mrs. Julia Farrart, stores and flats, at 304-306 South Halsted street; cost \$10,000.

Architect Fred. Alschlager reports: Three-story hall building, 50 by 125 feet, to be erected on Halsted street near Thirty-fifth, for C. O. Johnson, of 5,555 Wentworth avenue, pressed brick, stone and terra-cotta, heated by furnace; cost \$16,000.

Architect E. R. Krause reports: For R. H. Piratzky, three-story attic and basement store and flat building, to be erected on Blue Island avenue near Fourteenth street,

Anderson pressed brick, with stone and terra-cotta trimmings, slate roof, galvanized cornice; cost, \$25,000; mason contractors, Bodmer Bros.; carpenters, LeBeau Bros.; plumbers, Weber & Weppner; iron work, M. Benner.

Architects John Woolcott & Son: For C. A. David, three two-story dwellings, on Dayton street; cost \$10,000; contract let. For C. Schuarts, three-story and attic and basement flat building, on corner of Division and Wells streets; cost \$10,000. For Grace M. E. Church, three three-story dwellings, to be erected on corner of La Salle avenue and Locust street; cost \$15,000. For L. Willie, two three-story stores and flats, on North Clark street; cost \$17,000; Woolcott & Son, builders of all the above.

Cincinnati, Ohio.—The rise in the Ohio river has reached within five feet of the height of the flood two years ago, but as it is receding, little danger is apprehended.

Architects Smith & Forbush report: For A. G. Clark, two-story, nine-room, frame residence, at Home City, slate roof, half shingle. For O. H. Tudor, Walnut Hills, two-story stock brick residence, twelve rooms, slate roof, pine finish. For Wm. Van Hart, Walnut Hills, two-story, nine-room frame residence, slate roof, half shingles, bath rooms, laundry, etc. For Wm. L. Finch, two-story, ten-room frame residence, slate roof, ordinary plumbing. For G. W. McDermott, two-story, ten-room frame residence, slate roof, ordinary plumbing. For J. M. Brunsbish, remodeling warerooms and additional story to store, and new stairs. For Wm. Merrill Chemical Co., remodeling factory, two additional stories, fireproof. For Geo. Merrill, frame stable, 25 by 30 feet, all modern improvements. For N. D. Wildman, ten-room frame residence, slate roof, ordinary plumbing.

Architects Rumbaugh & Schureman report: For L. C. Black, fourteen-room stock brick residence, red stone trimmings, slate roof, hardwood finish; cost \$12,000. For A. W. McCormick, twelve-room brick residence, Bedford stone trimmings, slate roof, natural wood finish; cost \$7,000. Addition of sixty rooms to Dennison Hotel, six stories; cost \$20,000. This provides for a grand large entrance, with wood fireplace, etc., in the lobby. First Baptist Church, Bedford stone, Ashlar front and sides, slate roof. There are many more features which will be described, and may be illustrated in a future edition of this journal. For city, 13th District school house, two stories, twelve rooms; cost \$42,000. For city, 22d District school house, two stories, twelve rooms; cost \$36,000.

Architects Des Jardins & Hayward report: For J. F. Anderson, three and one-half story brick flat building, 90 by 80 feet; cost \$25,000. For C. W. Breneman, nine-room frame house, 40 by 60 feet; cost \$6,000. For J. H. Law, twelve-room brick house, 50 by 70 feet; cost \$13,000. For Benj. W. Punnam, twelve-room brick and stone residence, 40 by 70 feet; cost \$15,000. For J. F. Anderson, fine stone residence, 50 by 75 feet; cost \$35,000. For August Bepler, row of brick houses, 90 by 50 feet; cost \$12,000. Also considerable work outside the city.

Architect Gustav W. Drach, reports: For W. F. Kallmeyer, two-story, nine-room brick residence, slate roof, pine finish; cost \$9,000. For John Grossins, two-story, seven room frame and shingle residence, slate roof, pine finish, cost \$4,000. For John Schwab, two-story, six-room, frame dwelling, slate roof, pine finish; cost \$3,000.

Cleveland, Ohio.—Outlook good, with a fair amount of work already started.

Architect Chas. E. Cole reports: For E. J. Leighton, two-story frame dwelling, 30 by 45 feet; cost \$5,000; completed; James Kennedy, builder. For S. L. Hodges, two-story frame dwelling, 31 by 60 feet; cost \$4,500; completed; Chas. Case, builder. For A. W. Strong, two-story frame dwelling, 32 by 55 feet; cost \$4,500; completed; Chas. Case, builder. For Mrs. W. E. Ransom, two-story frame dwelling, 30 by 50 feet; cost \$1,800; completed; Chas. Case, builder. For N. A. Buell, two-story frame dwelling, 32 by 55 feet; cost \$2,500; completed; Wright & Newman, builders. For Geo. H. Reid, two-story frame dwelling, 31 by 62 feet, slate roof; cost \$4,500; completed; Latimer & Moore, builders. For Chas. H. Richards, two-story frame dwelling, 29 by 55 feet; cost \$2,000; completed; Wright & Newman, builders. For Wm. H. King, two-story frame dwelling, 31 by 50 feet, slate roof; cost \$2,500; completed; Henry Banks, builder. For A. W. French, two-story frame dwelling, 31 by 60 feet; cost \$3,800; completed; Wright & Newman, builders. For D. Russ, two-story frame dwelling, 34 by 60 feet; cost \$4,500; completed; W. A. S. Kelley, builder. For S. Mather, two-story brick block, 127 by 60 feet, six houses; cost \$25,000; completed; S. C. Brooks & Co., builders. For C. W. Chamberlain, two-story frame dwelling, 32 by 65 feet; cost \$3,000; projected. For A. W. French, two-story frame dwelling, 30 by 50 feet, slate roof; cost \$3,000; projected. For T. H. White, two-story frame dwelling, 28 by 50 feet, slate roof; cost \$2,000; projected. For Mrs. C. E. Cole, two-story frame dwelling, 26 by 47 feet, slate roof, cost \$2,500; under way; Wright & Newman, builders.

Cuero, Texas.—Architect N. J. Clayton, of Galveston, Texas, reports: For Rev. Father Joseph Ferra, brick church building, Romanesque style; cost \$5,000; under way.

Dallas, Texas.—It is very dull at present on account of the labor troubles. New railroads are being built, and it is expected a number of good buildings will be erected later in the season.

Architect S. Nelson, reports: For J. B. Simpson, two-story brick building, 35 by 60 feet, stone front; cost \$4,200; under way; S. Nelson, builder.

Davenport, Iowa.—General outlook is fair.

Architect J. W. Ross, reports: For Mrs. C. Carroll, three-story frame dwelling; cost \$4,000; under way. For H. Boulcher, story and a half dwelling; cost \$2,000; under way.

Davenport, Iowa.—Architect C. H. Gottig, of Chicago, Ill., reports: For Davenport Glucose Manufacturing Co., stone and corrugated-iron elevator, with capacity of 100,000 bushels; cost \$20,000.

Des Moines, Iowa.—Several "schemes" are being discussed by local parties, many of which will no doubt be abandoned. The prospect is very fair for the coming season.

Architect W. F. Hackney, reports: For Nourse & Kaufman, business block, 44 by 132 feet; cost \$35,000; projected. For State Agricultural Society, fair ground buildings; cost from \$50,000 to \$80,000; projected. For State University, chemical building, 50 by 80 feet; cost \$30,000; projected. For G. W. Marquardt, residence, 51 by 73 feet; cost \$25,000; projected. For John Miller, double tenement, 40 by 52 feet; cost \$8,000; contracted. For D. F. Wilter, residence, 32 by 43 feet; cost \$5,000. About \$100,000 will be expended on the Iowa state capitol building this year. The work will consist of finishing the basement rooms, mural decorations, putting up outside steps, painting up the building, etc.

Detroit, Mich.—Present condition is excellent and the outlook is that this will be a heavy building season.

Architects Mason & Rice were the successful gentlemen in the competition for the Y. M. C. A. building. They presented a fine building (Norman in style), to cost \$50,000. The design was for brick, but it has been decided to build it of stone. As this and other material changes are being perfected a full description will be more perfect later.

Architect R. T. Brooks reports: For Frank McCaugh, two-story brick and stone dwelling, 24 by 68 feet; cost \$4,500. Thomas Sherk & Co., builders.

Architect A. E. French reports: For Mrs. P. McGinnis, double three-story brick and stone dwelling, 50 by 80 feet, slate and gravel roof; cost \$6,000; Patrick Dun, builder.

Architect W. G. Malcomson reports: T. A. Parker, six-story brick, stone and iron furniture warehouse, 60 by 100 feet, tin roof; cost \$30,000; A. Chapaton, Jr., builder.

Architects Hess & Raseman report: For A. Germer, two-story brick store and dwelling, 22 by 43 feet, gravel roof; cost \$3,500; Spitzley Bros., builders.

Architect H. Englebert reports: For Chas. Turner, two-story brick and stone store and hall, 47 by 81 feet; cost \$5,000.

Mr. F. Newmann is building for himself a two-story brick store and dwelling, 50 by 56 feet; cost \$3,400.

Mr. Thomas Dudley is erecting a two-story frame dwelling, 34 by 64 feet; cost \$4,000; A. Beaton & Co., builders.

Mr. D. H. Osgood is building for himself two two-story frame dwellings, each 26 by 51 feet; cost \$3,900.

Mr. Jeremiah Connor is erecting five one-story frame cottages.

Mr. J. H. Farrell, two-story brick block of five stores, 90 by 60 feet; cost \$5,000; A. Beaton & Co., builders.

Mr. Chas. Turner is erecting a two-story brick and stone store and hall building, 47 by 81 feet; cost \$5,000.

Permits were issued during February for new buildings, to cost \$156,535. For alterations, etc., cost \$8,100. Total amount, \$164,635.

Dubuque, Iowa.—Architect F. D. Hyde reports: For Board of Education, two-story, four-room addition to brick school house, 36 by 58 feet; cost \$2,000; plans under way. For Waller & Coates, two-story brick double tenement, 40 by 48 feet; cost \$4,000; plans under way. For Consolidated Tank Line Co., two-story brick office and warehouse, 40 by 90 feet; also piers for three 1,000-barrel iron tanks and brick engine house, 15 by 20 feet; plans under way; cost not estimated.

Englewood, Ill.—Architect W. L. Carroll, of Chicago, reports: For L. H. Fluke, two-story frame dwelling, 26 by 48 feet; cost \$2,500. For C. H. Crane, two-story frame dwelling; cost \$2,500.

Eldon, Iowa.—Architect Edward Clark, of Ottumwa, Iowa, reports: For W. G. Crow, two-story and basement store and office building, 24 by 80 feet; brick, with white brick, cut stone and galvanized iron trimmings; cost \$3,200; under way.

Evanston, Ill.—Architects Edbrooke & Burnham, of Chicago, report: For J. C. Connor, two-story pressed brick and stone store and flat building, 56 by 116 feet; cost \$22,000.

Fargo, Dak.—The *Argus* office was burned March 26. Loss \$30,000. Insurance \$8,000.

Frankfort, Ind.—Present condition is not very good, nor is the outlook encouraging.

Architect J. N. Hammond reports two frame cottages under way, to cost \$1,800 and \$2,500.

Fremont, Ohio.—Present outlook for building in this vicinity is not very flattering, still hopes of improvement are entertained.

Architect J. C. Johnson reports: For Erie county, County Infirmary building, 152 by 74 feet; cost \$30,000; contracts let March 30. For Catholic society, St. Joseph's Church, 162 by 80 feet; cost \$50,000; ready for inside finish.

Ft. Wayne, Ind.—Architects Kendrick & Shrimpton report: For S. A. Burrows, frame dwelling; cost \$3,000. For B. R. Nall, brick dwelling; cost \$4,500. For L. Fox, store building; cost \$13,000. Catholic Orphan Asylum; cost \$25,000.

Architect H. W. Mason reports: For Wm. Sander, two-story double brick dwelling, 50 by 60 feet, slate roof; cost, about \$4,500. For A. Racine, double brick dwelling, 40 by 55 feet; cost, about \$3,000.

Galesburg, Ill.—Architects Edbrooke & Burnham, of Chicago, report: For the Fraternity Hall Association, three-story store, office and hall building, 66 by 100 feet, brick, stone and terra-cotta; cost \$30,000.

Galveston, Tex.—Present condition and outlook for building is fair.

Architect N. J. Clayton reports: For Gulf, Colorado & Santa Fe Ry., car, machine and work shops, one-story, with lantern light, corrugated iron roof; cost \$35,000; projected. For J. Cohen, two-story frame dwelling, tin roof; cost \$4,000; projected. For L. Blocks, two-story frame dwelling, tin roof; cost \$8,500; projected. For Col. W. H. Sinclair, two-story frame residence, slate roof; cost \$8,000; projected. For Col. W. B. Denson, two-story residence, slate roof; cost \$7,000; projected. For L. Meyers, one-story frame cottage, slate roof; cost \$4,500; projected.

Geneseo, Ill.—Architect H. Boehme, of Joliet, Ill., reports: For A. O'Brien, cottage; cost \$2,000; under way.

Grubb, Kan.—Architects Wm. S. Eames and Thos. C. Young, of St. Louis, Mo., report: frame farm house to cost \$5,000; projected.

Hannibal, Mo.—The present condition as well as the outlook is rather gloomy, the discontent among laborers having intimidated capitalists somewhat.

Architect Jas. Oliver Hogg reports: For city of Hannibal, eight-room school house, 48 by 38 feet; cost \$10,000; under contract; Hogg & Sons builders. For W. D. Anderson, two-story double store, 40 by 62 feet; cost \$4,000; under contract; Hogg & Sons builders. For Sibel & Reddell, two-story double store, 50 by 62 feet; cost \$7,000; under contract; Chas. Hobb, builder. For Mrs. Rendline, two-story dwelling, 30 by 40 feet; cost \$3,500; projected. For Mr. Jacoby, two-story store building, 20 by 60 feet; cost \$2,500; projected. For James Hayward, two-story dwelling, 30 by 36 feet; cost \$4,000; projected. For Mr. Bethan, two-story dwelling, 30 by 36 feet; cost \$1,200. For the city, one-story electric light building, 40 by 70 feet; cost \$2,000. For Annheiser & Busch Brewing Co., two-story refrigerator building; cost \$4,000; projected. For Mr. Holt, two-story store, 20 by 60 feet; cost \$2,000; under way.

Hastings, Neb.—Prospects at present very promising for building in the central part of the state.

Architect C. C. Rittenhouse reports: For F. Johnson, First National Bank, two-story and basement brick store and bank building, 50 by 94 feet; cost \$16,000; contracted; Roberts & Hammon builders. For Wm. Kerr and others, three-story stone building, 47 by 90 feet; cost \$15,000; under way; Scales & Clark, builders. For Samuel Alexander, three-story store building, 22 by 90 feet; cost \$5,000; Jeff. Ellis, builder. For Carson Hamott, two-story frame dwelling, 36 by 48 feet; cost \$3,000; contract not let. For J. J. Judson, two-story frame dwelling, 26 by 50 feet; cost \$2,500; contract not let. For Chas. K. Lawson, two-story frame dwelling, 38 by 50 feet; cost \$4,500; contract not let. For W. H. Lanuing, two-story frame dwelling, 38 by 52 feet; cost \$7,000; under way; work done by the day. For James B. Hartwell, two-story frame residence, 52 by 60 feet; cost \$19,000; under way; work done by the day. For A. W. Cox, two-story frame dwelling, 32 by 50 feet; cost \$3,000; M. Judd, builder. For Masonic Fraternity, three-story brick hall, 66 by 100 feet; cost \$23,000; plans in preparation; also several smaller buildings.

Hillsboro, O.—The outlook is not encouraging, but is better than at this time last year. Considerable country work is expected.

Architect Joseph H. Ott reports: For E. L. Ferris, two-story frame; cost \$6,000; projected; Kremer & Hartman, of Columbus, builders. Mr. Ott also reports a number of smaller buildings, ranging in cost from \$1,000 to \$2,000.

Hot Springs, Ark.—Architect J. H. Carpenter, of Chicago, reports: For H. Warner and others, a sixty-room frame hotel; cost \$10,000; projected.

Huntington, Ind.—Architects E. O. Fallis & Co., of Toledo, Ohio, report: For Montgomery county, brick and stone court house; cost \$40,000; projected.

Huron, O.—Architect J. C. Johnson, of Fremont, O., reports: school house, 76 by 81 feet; cost \$18,000; under way; W. H. Campfield builder.

Hutchinson, Kan.—Outlook for building is fair.

Architect A. B. Howatt reports: For T. F. Leidigh, two-story stone building, 25 by 120 feet; cost \$8,000; Fraser & Co., masons; Fairchild & Cathcart, carpenters. For W. L. Woodnutt, two-story frame, 32 by 48 feet; cost \$4,500; under way. For S. Bigger, two-story brick, 25 by 100 feet; cost \$4,300; not yet commenced. For Fred. Ryde, two-story brick, stone front, 25 by 75 feet; cost \$3,000; not yet commenced. For S. H. Sidlinger, two-story brick, stone fronts, 50 by 100 feet; cost \$6,500; not yet commenced.

Hyde Park, Ill.—Architect S. M. Randolph, Chicago, reports: two-story dwelling, Anderson pressed brick, with stone trimmings, galvanized iron cornice, heated by furnace; cost \$4,000; contract not let. add Kansas City, Mo.

Architect Edbrooke & Burnham report: For Wm. M. Craig, of C. J. L. Meyer & Sons Co., three two-story frame dwellings, 22 by 36-6 feet; cost \$7,500.

Architect W. H. Adams, of Chicago, has planned a dwelling for A. E. Bingham, to cost \$11,000; also for H. M. Barnard, two residences on South Park avenue, to cost \$10,000.

Architect Geo. Beaumont, of Chicago, reports: For A. H. Lawden, two residences, to be erected on Lake avenue, near 43d street; cost \$11,000.

Hyman, Dak.—Architect Ernest Baillie, of East Pierre, Dak., has been selected as architect of Hyde County Court House, to be erected here. Mr. Baillie also reports a three-story and basement hotel building, 72 by 72 feet.

Independence, Kan.—Architects E. O. Fallis & Co., of Toledo, Ohio, report: Three-room school house; cost \$7,000; under way; W. Hooker builder.

Ionia, Mich.—Architect O. Waterbury, reports: For Osmond Tower, three-story brick block, 82 by 90 feet; cost \$20,000; projected. For John H. Walsh, frame dwelling; cost \$2,800; projected. Claire Allen, builder. For A. S. Wright, improvements in residence; cost \$1,500; projected. Several building projects are spoken of, but not definitely; among these is a three-story brick and stone block.

Joliet, Ill.—Architect H. Boehme, reports: For Geo. L. Vance, three-story and basement store building, 58 by 66 feet, Anderson pressed brick and stone trimmings, galvanized iron cornice, plate glass, elevator, etc.; cost \$8,000; contract not let. For Robert Walsh, remodeling frame residence, colored glass, etc.; cost \$2,500; contract not let.

Kansas City, Mo.—Present condition and outlook not as good as was expected. Dullness of the building trade is largely due to strikes and real estate speculation.

Architects Knox & Guinotte, report: For S. T. Smith, double three-story building, 48 by 70 feet, slate mansard roof; cost \$12,000. For same, two single three-story buildings, 24 by 70 feet; cost \$6,000 each; under way; work done by the day. For W. B. Teasdale, two-story brick, 42 by 75 feet, slate roof; cost \$6,000; under way; F. M.

Sharp, builder. For Thomas Ridge, two-story brick, 45 by 60 feet, slate roof; cost \$7,500; under way; T. O. Combs, builder. For S. Z. Schulte, five-story stone front business block, 50 by 110 feet, cost \$60,000; under way; James Guyman, builder. For Martin Birmingham, two-story and basement brick residence, 23 by 42 feet; cost \$3,500; under way; work done by the day. For J. K. Stark, double two-story brick and terra-cotta building, 48 by 70 feet; cost \$16,000; projected. For G. M. D. Knox, two-story brick with stone trimmings, 33 by 52 feet; cost \$5,000; projected.

Architect H. Probst, reports: For S. D. Mills, two-story brick dwelling, 31 by 35 feet; cost \$3,500; under way; S. H. Beresford, builder.

Architects Bauer & Hill, of Chicago, report: For Broadway Panorama Co., pressed brick panorama building to cost \$60,000; the important feature of the building will be the construction of the roof which will be entirely new, making trusses 128 feet span without any center support; building will be located on the corner of Broadway and Ninth street, a spacious entrance, elegantly fitted, will be at the south end of the building, midway between Eighth and Ninth streets, and not on the corner as is usual with this class of buildings; September 1, is the date set for opening; the building is now under way, under the supervision of Architect A. Van Brunt, of this city; the painting to be exhibited is the Battle of Chattanooga, now being executed by Prof. Bracht, of Berlin.

Architect H. Probst reports: For A. R. Meyer, two-story and basement and attic residence, 50 by 60 feet; first story, St. Louis pressed brick; second story, slate; gables red (Akron, Ohio) tiles; brick work will have terra-cotta trimmings; brick terrace and carriage porch; cost \$22,000; under way; H. Schultz & Son, contractors for foundations; Eyssell & Crosby, carpenter work.

Kawkawlin, Mich.—Architect D. P. Clark, of West Bay City, Mich., reports: For Edward Maginness, two-story brick-venered house, 32 by 53 feet; cost \$3,000; under way; S. Stringer, builder.

Architect F. B. Hamilton reports: For English Bros., five-story and hasement brick building, 48 by 108 feet, stone trimmings, gravel roof; cost \$22,000; plans nearly completed. For A. Altman, two-story and basement brick dwelling, 20 by 45 feet; cost \$4,000; also alterations, to cost \$500; under way. For Ashgrove Lime Association, one-story frame warehouse, 38 by 100 feet; cost \$1,800; plans made.

Architect Geo. Carman reports: For C. McBride, five-story brick building, tin roof; cost \$4,500; under way. For V. B. Buck, three-story brick building; cost \$30,000; under way. For Mathew Butler, three-story brick building, slate roof; cost \$8,000. For J. W. German, two-story brick dwelling, slate roof; cost \$7,000; under way.

Knoxville, Tenn.—The floods have interrupted building in this section to a great extent.

Architects Adams Bros. report: For D. B. Loreman & Co., on the corner of Eighth and Cherry streets, three-story and basement building, containing five stores; basement and foundation walls limestone; superstructure brick, with terra-cotta and stone trimmings, tin roof, 65 by 243 feet, fronts on three streets, total frontage 363 feet; cost \$50,000; basement and first story up; D. J. Chandler, builder. For S. M. Winchester, corner of Market and Seventh streets, four-story and basement building, four stores and bank; basement exterior walls and foundation limestone, superstructure brick with terra-cotta and marble trimmings, tin and slate roof, 110 by 200 feet, fronts on three streets, total frontage 420 feet; cost estimated at \$103,000; excavations being made; other contracts not yet awarded. For J. W. Adams, corner of Eighth and Cherry streets, three-story and basement, eight stores; basement and foundation walls limestone, superstructure, main front stone, other fronts brick with stone trimmings, tin roof, 100 by 220 feet, fronts on three streets, total frontage 420 feet; cost \$45,000; roof on; W. S. Adams, builder. For the trustees of the M. E. Church, block of two stores with apartments above, three stories high, 35-6 by 65 feet, near corner of Cherry street and Georgia avenue, foundations limestone, superstructure brick with stone trimmings; cost \$6,000; under way; H. C. Jackson, builder. For T. H. Boughton, ten-room frame dwelling; cost \$3,000; projected. For Willingham & Son, frame dwelling; cost \$3,500; under way; J. R. Taylor, builder.

Kenwood, Ill.—Architect J. H. Carpenter, of Chicago, reports: For Mrs. A. Shattuck, frame residence, 28 by 50 feet; cost \$5,000.

Lake Forrest, Ill.—Architects Cobb & Frost, of Chicago, report: For Presbyterian Society, stone church building, timber and slate roof, finished in hardwood. The building will be rural in style and have a seating capacity of about 600; cost \$10,000.

Lake View, Ill.—Architects Treat & Foltz, of Chicago, report: Frame store and hall building, 40 by 70 feet, on Clark street near Addison avenue depot; cost \$6,000; J. Rancke, carpenter; J. G. Dietz, mason.

Architect J. L. Silsbee, of Chicago, reports: Plans for four, pressed brick, stone and wood dwellings; it is said they will be among the handsomest suburban houses; the owners are J. B. Waller, Jr., R. A. Miller, H. J. Peet and H. A. Knott; cost not estimated.

Architect W. L. B. Jenney, of Chicago, reports: For Roswell King, two and one-half-story frame residence; cost \$6,000.

Architect F. Baumann, of Chicago, reports: For Town of Lake View, two-story brick, stone and terra-cotta engine house and police station, 152 by 80 feet, Anderson pressed brick, heated by steam; cost \$15,000; contracts let.

Lancaster, Mo.—Architects Allen & Coxhead, of Streator, Ill., report: For city of Lancaster, two-story brick school house, 70 by 65 feet, stone trimmings, six room; cost \$7,500; contract not let.

Lansing, Mich.—Architect I. Gillett, reports: For Thomas Sawyer, two-story brick store building, 23 by 70 feet; cost \$3,000; not contracted.

Laramie, Wyo.—Present season good; outlook better for the coming season. A Territorial University building bill has just passed the legislature. The building will be erected here this summer at a cost of \$50,000.

W. A. McKenzie, builder, reports: For J. H. Symons, two-story brick office, 24 by 24 feet; cost \$4,100; Gittings & Lemmattess, builders. For U. P. R. R. Co., one-story frame building, 30 by 100 feet; cost \$5,000; under way; U. P. R. R. Co., builders. Also, five frame houses; under way; cost about \$1,000 each.

Leavenworth, Kan.—Business outlook is good, and the real estate market shows considerable activity.

Architects Wells & Phelps, report: For Dr. Robert L. Wood, two-story frame dwelling, 37 by 50 feet; cost \$3,500; under way; J. H. Coldren, builder. For Judge Stillings, forty-foot addition and handsome front to residence; under way; Henry O'Neal, builder. For J. M. Lee, two-story, eight-room frame dwelling; under way. For W. H. Farrell, Sr., four-story brick store and flats; projected; cost not estimated. For J. H. Brandon, two-story store and flat, 24 by 60 feet; cost \$3,800; under way; Wilcott & Stier, builders. For Mr. Davis, two-story brick store, 38 by 65 feet; cost \$5,000; projected. For J. H. Jeorgier, ten-room dwelling, 42 by 65 feet; cost \$5,000; projected; also, considerable smaller work. These gentlemen also have charge of the work on the U. S. government building, to cost \$150,000, now under way, and report the concrete foundation already in.

Lincoln, Ill.—The season is very backward, little work being done now; many men in the building trade are idle.

Architect W. Hunter reports a number of small buildings, ranging in cost from \$900 to \$1,500.

Little Rock, Ark.—Architect Fred. J. H. Rickon reports: Since my last I can report the following: For A. L. Schader, two brick stores, between Seventh and Eighth, on Main street; to cost \$6,000. For Fletcher & Hotze, remodeling Grand Opera House and changing it into a three-story building, to be used as a dry goods establishment. For Clas. Kramer, frame residence, at Twentieth and Scott streets; estimated cost \$3,000. For G. P. C. Rumbough, frame residence, at Markham and Gaines streets; cost about \$3,000. For Jno. B. Bond, brick store, at Markham and State streets; cost \$3,000. All the above are under way.

Plans are ready for a residence, to cost \$6,500, for Geo. B. Tilles, at Fort Smith, Ark. There is also a plan competition open for a \$50,000 building for the Betlin schools at Fort Smith, but no decision has been arrived at yet.

Lockport, Ill.—Architect H. Boehme, of Joliet, Ill., reports: For C. F. Draw, dwelling; cost \$2,500; contract not let. For W. S. Meyers, three frame dwellings; cost \$2,500 each; contract for stone work let.

Louisville, Ky.—Outlook is only fair. It is dull at present. All classes of mechanics are inclined to hold their labor at higher rates, and are forming local unions to aid in their demands. This will cut down the building to a considerable extent if persisted in.

Architect Mason Maury reports: For Mrs. Fanny Speed, a fire-proof office building, 48 by 103 feet, 46 offices, to be built of brick, stone, terra-cotta and iron; cost \$70,000; taking bids. For W. S. Mathews, stone and brick dwelling, 44 by 66 feet; cost \$2,000; under way. For H. L. Stone, brick dwelling, 30 by 60 feet; cost \$8,100; under way;

Jno. Greiner & Bros., builders. For Dr. B. O. Boyle, brick dwelling, 23 by 58 feet; cost \$4,500; under way; J. N. Struck & Bro., builders. For Russell Houston, brick and stone dwelling, 38 by 64 feet; cost \$18,000; under way. For K. W. Smith, brick and stone dwelling, 37 by 56 feet; cost \$16,000; under way. For C. P. Moorman, brick dwelling, 40 by 26 feet; cost \$4,500; taking bids. For J. M. Bocker, brick and terra-cotta dwelling, 32 by 52 feet; cost \$8,200; taking bids. For W. M. Mundy, brick and terra-cotta dwelling, 30 by 50 feet; cost \$7,500; taking bids. For Geo. Merz, brick and stone dwelling, 40 by 53 feet; cost \$9,000; drawings under way.

Macon, Ga.—Present condition and outlook for building is good.

Architect A. Blair reports: For Robert H. Plant, office building, 36 by 50 feet; cost \$7,500; under way; R. C. Wilders' Sons, builders. For Mrs. F. M. Palmer, two-story frame dwelling, 47 by 60 feet; cost \$3,500; plans in preparation. For Dr. C. H. Hull, two-story and basement brick and frame residence, 49 by 72 feet; cost \$6,000; plans in preparation. For R. L. Berner, two-story frame, 39 by 37 feet; cost \$2,500; plans in preparation. For Robert Coleman, two-story frame, 39 by 37 feet; cost \$2,000; plans in preparation.

Mason, Mich.—Architect D. P. Clark, of West Bay City, Mich., reports: For H. W. Williams, two-story frame dwelling, 33 by 60 feet; cost \$4,000; plans just completed.

Mankato, Minn.—Building outlook is good. The plans of Architects Haley & Allen, of Minneapolis, Minn., for the Blue Earth County Court House, were adopted. It will be two stories and basement high, 80 by 100 feet, to be built of stone, with tin and slate roof. Bids to be called for after May 4. The foundations are to be put in this year.

Architect Geo. Pass reports: For Baptist Society, brick and stone church building, 50 by 100 feet; cost about \$12,000; projected. For Geo. Pass, three-story brick and stone office building, Bodine road; cost \$3,500; under way; O. R. Mather, contractor for brick and stone work.

Marshalltown, Iowa.—Architect W. A. Hawley reports: For W. A. Wass, a two-story brick and stone residence, redwood roof, 34 by 46 feet; cost \$3,500; foundations in. For Attorney Smith, remodeling two-story frame residence, 31 by 43 feet; at cost of \$2,000. This work was mentioned in our March regular and intermediate issues erroneously credited to Architect F. M. Ellis.

Median, Ohio.—Architect D. P. Clark, of West Bay City, Mich., reports: For Willis H. Abbro, two-story frame dwelling, 35 by 56 feet, slate roof; cost \$3,500; plans on the boards.

Millersburg, Ohio.—Architect H. W. Matson, of Ft. Wayne, Ind., reports: For B. S. Young, two-story brick store building, 33 by 60 feet; cost, about \$4,000.

Minden, Neb.—Architect C. C. Rittenhouse, of Hastings, Neb., reports: For Rogers & Chapin, two-story and basement brick bank building, 22 by 80 feet; cost \$7,000; contracted.

Minneapolis, Minn.—Architects generally report business picking up, but are not prepared to make their more important engagements public yet.

Architect W. A. Hunt reports: For the Northern Pacific Railroad Co., three stations on the "Short Line," between St. Paul and Minneapolis; cost \$2,500 each; also three to cost \$1,600 each. For T. W. Kelly, granite monument, to be erected in Jesserland Cemetery, Sibley Co., Minn.; cost \$2,000. For J. H. Weider, residence, to cost \$6,500.

Mobile, Ala.—Outlook for building is good.

Architect James H. Hutchinson, reports: For S. G. Stone, one-story frame cottage; cost \$2,000; projected. For A. Philippi, two-story brick building, 20 by 69 feet, slate roof; cost \$2,500. For P. W. Walsh, one-story frame cottage; cost \$1,500; M. Smith, builder. For Spring Hill College, repairs, etc.; cost \$3,000; under way. For Mrs. G. Turner, repairs, etc.; cost \$2,000; projected.

Moline, Ill.—Architect J. W. Ross, of Davenport, Iowa, reports: Two two-story brick school buildings; cost \$15,000 each; plans under way.

Architect James H. Hutchinson reports: Several small buildings ranging from \$800 to \$2,700 in cost.

New Corporations.—The Chicago Ventilating Company: capital stock, \$50,000; incorporators, William W. Baldwin, Jr., Richard Henry Towne and Jesse J. Simpson. The Standard Brick Company, at Chicago: capital \$100,000; incorporators, Joseph T. Torrence, Dwight F. Cameron and Horatio F. Williston.

New Iberia, La.—Architect N. J. Clayton, of Galveston, Texas, reports: For Rev. Father Jacques, brick church in the thirteenth century Gothic style; cost \$20,000; projected.

Norfolk, Va.—Outlook fair, but will be very gloomy unless the labor troubles are settled very soon. At present things in general are in a very unsettled condition.

Architect Geo. C. Moser reports: For S. A. Stevens, four-story building, 50 by 50 feet, for stores, offices and flats, to be built of brick, terra-cotta, marble and Potomac stone; cost \$11,684; contract let; C. R. Parlett, builder. For R. W. Webb, frame cottage, 22 by 40 feet; cost about \$1,500; Richard Wilkins, builder. For Geo. G. Tait, three-story store and office building, 36 by 96 feet; cost \$7,221; Keeling & Fletcher, builders. For Geo. H. and Wm. H. Wales, double residence, 42 by 90 feet; cost \$7,000; A. E. Murray, for Chas. Myers, residence, 30 by 80 feet; cost \$6,000; C. R. Parlett, builder.

North Springfield, Mo.—Building outlook is very good.

Architects Abbott & Hobenschild, report: For Springfield, Me., School Board, brick school building, 56 by 74 feet, limestone trimmings, galvanized iron cornice, slate roof, modern style, heated by the Rutan system, all modern improvements; cost \$8,000; contract not let.

Omaha, Neb.—Building outlook somewhat gloomy owing to the unsettled labor question, contractors are willing to bind themselves to almost anything, and owners seem afraid to venture.

Architect Sidney Smith reports: For John Ledevich, three-story and basement brick stores and flats, 66 by 80 feet; cost \$18,000; under way; John Swiss, builder. For H. W. Cremer, three-story and basement stores and flats, 60 by 66 feet; cost \$16,000; under way. For Burr & Wilson, five-story and basement, brick and stone hotel and store building, 88 by 140 feet; cost \$65,000; projected. For Baptist Congregation, brick and stone church, 96 by 106 feet, slate roof; cost \$28,000; projected. For C. W. Pearce, brick residence, 38 by 56 feet; cost \$6,000; contracts let. For Presbyterian Society, brick and frame church building, 56 by 90 feet; cost \$6,500; under way. For West Side Building Association, twelve two-story and basement dwellings, 26 by 40 feet, average cost \$2,500.

Owatonna, Minn.—The contractors for building the state school buildings are on the grounds with their men. The contract has been let for the erection of the ladies' hall, to cost \$25,000, donated by Hon. G. Pillsbury to the Minnesota academy, to be furnished by the Baptist churches of the state. The contract for building the large packing-house was also let on Saturday. This house is to have all the latest appliances, the president having visited the packing-houses of Chicago and Kansas City during the winter, and, being a practical packer, he will get the best that money can secure. It is also proposed to build a starch factory near a water-power on Straight river.

Peoria, Ill.—Architects Allen & Coxhead, of Streator, Ill., report: For M. E. Society, frame church building, 57 by 115 feet; cost \$10,000; contract not let.

Phoenix, Ara.—Building, as well as general business, outlook is good.

Architect J. M. Creighton reports: For Dr. Goodrich, one-story brick store building, 100 by 80 feet; cost \$7,000; under way; B. Cox, builder. For W. H. Reid, two-story brick store building, 50 by 80 feet; cost \$11,000; under way; Chas. Foster, builder. For W. Rimm, building, one-story frame; cost \$800. For B. Goodrich, one-story brick residence, 21 by 45 feet; cost \$6,000; under way; day work. For S. D. Lount, one-story brick factory building, 35 by 50 feet; cost \$6,000; projected. For S. E. Patton, one-story frame, 28 by 35 feet; cost \$3,000; under way. For Arizona Territory, three-story brick insane asylum, 300 by 600 feet; cost \$75,000; under way. For same, two-story brick Normal school building, 85 by 65 feet; cost \$11,000; under way; Patton & Creighton builders.

Pierre, Dak.—Architect Ernest Baillie, reports: An Episcopal church building to cost \$6,000.

Ravenswood, Ill.—Architects Cole & Dahlgren, of Chicago, report: For School Board, one story and basement brick and stone school building, 90 by 68 feet; cost \$12,000; contract let.

Richmond, Ind.—Work on the eastern insane asylum is being rapidly pushed; the buildings will be completed by January 1, 1887; E. H. Ketchum, of Indianapolis, architect; W. S. Kaufman, superintendent.

Architect W. S. Kaufman, reports: For R. H. Shoemaker, two-story and attic brick residence, 52 by 74 feet, stone trimmings; cost \$20,000; drawings just completed.

Richmond, Va.—Architect B. J. Black, reports: For Little Sisters of the Poor, chapel with basement and main floor, brick with stone and iron trimmings, 30 by 82 feet; the building will be purely Grecian in style; cost \$7,000; under way; F. Sitterding, builder. For Dr. R. G. Crouch, three-story brick dwelling, 32-6 by 97 feet, brown-stone trimmings; cost \$12,000; under way; Bell & Bowles, builders. For Col. John Murphy, three-story and mansard building, 39 by 60 feet, brick, iron, stone and terra-cotta, cathedral glass windows, etc.; cost \$18,000; Frederick Wetz, builder.

Roanoke City, Va.—Architect J. E. Tinsley, of Staunton, Va., reports: For Dr. J. A. Gale, two-story residence, ornamental brick, galvanized iron trimmings, slate roof, seven rooms; cost \$5,500; under way; H. F. Henderson, carpenter; Jas. Eastman, mason. For Dr. A. B. Koerner, two-story seven-room, brick residence; estimated cost \$4,000; plans in preparation.

Rock Springs, Wyo.—Architect J. W. Ross, of Davenport, Iowa, reports: For O. C. Smith, two-story frame dwelling; cost \$5,000; under way.

San Antonio, Tex.—Building is very quiet at present, but the outlook is very encouraging for the near future.

Architects Gordon & Shelton report: For T. F. Parrott, one-story frame dwelling, 40 by 60 feet; cost \$3,800; J. E. Rendle, builder. For T. Campbell, two-story frame dwelling, 30 by 50 feet; cost \$3,500; taking bids. For Val Verd county, Texas, two-story rock jail building, 40 by 55 feet; cost \$18,000; Martyn, Brynes & Johnson contractors. For O. J. Woodhull, two-story frame dwelling, 40 by 60 feet; cost \$5,200; A. C. Prentice, builder. For L. S. Berg, two-story rock residence, 42 by 65 feet; cost \$14,000; day work. For J. Lowenstein, one-story frame dwelling, 37 by 70 feet; cost \$4,000; G. Findlay, builder. For C. Villemain, two-story brick store building, 26 by 46 feet; cost \$3,000; Kleindienst & Gleason, builders. For W. Atkinson, two-story frame dwelling, 45 by 60 feet; cost \$10,000; projected. For Medina county, Texas, two-story rock jail building, 35 by 50 feet; cost \$10,000; taking bids. For J. J. Stevens, one-story brick dwelling, 30 by 35 feet; cost \$2,500; projected. For Traders' National Bank, alterations; cost not estimated.

Saratoga, Kan.—Architect A. B. Howatt, of Hutchinson, Kan., reports: For J. D. Rosam, one and one-half-story frame, 42 by 38 feet; cost 2,000; not yet commenced.

Seymour, Ind.—Very little building going on or projected. Outlook is not encouraging.

Architect J. Balsley reports: For Preston Rider, two-story frame dwelling, 22 by 36 feet; cost \$2,000; projected. For Henry Brunning, one-story brick and frame concert hall; cost \$1,500; projected.

Socorro, N. M.—The outlook for the trades for the coming season is good, with a full supply of labor. There is a good opening for a lumber dealer, as there is only one firm that deals in building materials.

Architect P. H. Gillespie reports: For Mrs. A. Abeitia, two-story brick, tin roof; cost \$9,500; about completed; Leavitt & Watson builders. For Abe Coon, two-story brick, tin roof; cost \$14,000; under way. For Thomas Tilly, block of one-story brick tenement houses; cost \$5,000; Thos. Tilly, builder. For Thos. Dorsey, two-story frame addition; cost \$2,000; P. H. Gillespie builder. For A. Curtesy, two-story brick; cost \$5,000; projected. For F. Baca, two-story brick business house; cost \$10,000; projected. For I. Harlon, two-story brick dwelling; cost \$2,000; under way.

South Bend, Ind.—Architects Cobb & Frost, of Chicago, Ill., report: For Clem Studebaker a \$60,000 residence.

South Chicago, Ill.—Architect C. H. Götting, of Chicago, reports: For A. Oehmich, three-story store and hall building, 28 by 80 feet, pressed brick and terra-cotta trimmings; cost \$9,000; Otto Schoening, contractor.

Springfield, Ill.—Architect W. W. Boyington, of Chicago, Ill., reports: For the Marine Banking Co., three-story bank and office building, 27 by 117 feet, stone front, steam heat; cost \$20,000.

Spring Valley, Ill.—Architect H. Boehme, of Joliet, Ill., reports: For the Chicago, Rock Island and Pacific R. R. Co., depot; cost \$2,000; under way.

Staunton, Va.—Present condition and outlook is fair, better than at same time last year.

Architect J. E. Tinsley reports: For Julius Scheffer, two-story brick store building, 25 by 85 feet, tin roof, galvanized iron cornice; cost \$4,000; under way; W. T. Marr carpenter, W. B. Plunkett mason. For C. S. Baker, two-story residence, eight rooms, modern improvements, ornamental brick, galvanized iron trimmings; cost \$7,000; under way; Lushbaugh Bros., carpenters; W. B. Plunkett, mason. Also several smaller buildings under way.

St. Louis, Mo.—Architects Wm. S. Eames and Thos. C. Young report: For G. W. Simpkins, two and one-half-story brick and stone dwelling, 60 by 40 feet; cost \$25,000; under way; Frank S. Greene, builder. For G. H. Holland, two-story brick and stone dwelling, 40 by 55 feet; cost \$13,000; under way; Frank S. Greene, builder. For Augustus Free Hospital, brick and stone building, 65 by 38 feet, framed gables; cost \$12,000; under way; Jos. L. Guedry, builder. For Leverett Bell, two-story brick dwelling, 35 by 37 feet; cost \$8,000; under way; Frank S. Green, builder. For H. C. Ives, two-story brick dwelling, 35 by 36 feet; cost \$10,000; under way; Kerr & Allan builders. For N. W. Perkins, brick dwelling, 30 by 60 feet; cost \$8,000; projected. For C. R. Erwin, two-story frame cottage; cost \$4,000; under way; John Ferguson builder. For Mrs. E. C. Copelin, two suburban dwellings, brick, 37 by 40 feet; cost \$6,500 each; projected.

Among the building permits issued since last report are the following, which call for an expenditure of \$4,000 or over: P. Cullnany, two two-story brick flats, 36 by 52 feet; cost \$4,000; D. Cregan, builder. T. Behring, three two-story brick dwellings, 50 by 53 feet; cost \$5,000; A. Haeselet, builder. Mrs. M. C. Bringham, two-story brick dwelling 21 by 48 feet; cost \$4,000; J. Low, builder. John O'Neil, four-story brick hotel building, 25 by 152 feet; cost \$13,981; John Helm, builder. Missouri Car Co., two-story car stable, 100 by 150 feet; cost \$17,000; Millburn & Rich builders. Anhauser & Busch, two-story brick wash-house, 65 by 96 feet; cost \$7,000; sub-let. M. Laine, four two-story brick dwellings, 69 by 48 feet; cost \$10,000; M. Laine, builder. G. W. Bennett, two-story brick store and dwelling, 25 by 40 feet; cost \$4,000; F. F. Marley, builder. Wm. Grassmuck, two-story brick dwelling, 22 by 60 feet; E. Hoffmann, builder. T. H. Tempel, two-story brick dwelling, 50 by 42 feet; cost \$4,500; M. Kirkwood, builder. J. Stocke, two two-story brick dwellings, 40 by 51 feet; cost \$5,000; L. Jaeger, builder. J. Straus, five-story brick store building, 60 by 125 feet; cost \$30,000; S. Hofman, builder. J. D. Healy, three two-story and mansard dwellings, 60 by 50 feet; cost \$8,000; F. H. Gray, builder. J. H. Pierman, two-story brick dwelling, 25 by 72 feet; cost \$5,800; J. D. Fitzgibbon, builder. C. M. Jennings, two-story brick dwelling, 34 by 39 feet; cost \$4,200; sub-let. T. Mohan, three two-story brick dwellings, 47 by 44 feet; cost \$5,000; T. J. Kelly, builder. T. Kelly, two-story brick dwelling, 50 by 47 feet; cost \$6,000; T. F. Kelly, builder. Mrs. Körner, two-story brick dwelling, 84 by 26 feet; cost \$5,000; Hartmann & Debus builders. H. Vogelsang, two two-story brick dwellings, 33 by 50 feet; cost \$5,000; H. Drees, builder. H. Strodick, two-story and mansard brick dwelling, 34 by 56 feet; cost \$5,200; B. Aeppen, builder. Mrs. Bevis, two-story brick dwelling, 35 by 39 feet; cost \$5,000; sub-let. Seibel, Shesdorf & Co., three-story brick factory building, 85 by 108 feet; cost \$8,500; Wm. Riecoe & Son, builders. Jos. Donovan, four two-story brick dwellings, 60 by 50 feet; cost \$6,000; D. C. Hilthausen, builder. Southern Cooperative Co., three-story brick warehouse, 48 by 80 feet; cost \$5,000; A. Dietz, builder. Wm. Bogge, two-story brick dwelling, 22 by 70 feet; cost \$4,500; S. L. Jones, builder. L. H. Rumsey, two-story brick dwelling, 21 by 56 feet; cost \$4,000; S. L. Rumsey, builder. Mutual House-Building Company, two-story brick dwelling, 32 by 51 feet; cost \$4,500; J. V. Meyers, builder. A. P. Ghio, two-story and mansard brick dwelling, 24 by 70 feet; cost \$8,000; S. C. McCormick, builder. R. M. Poulin, two-story brick dwelling, 47 by 45 feet; cost \$8,000; A. E. Cook, builder. German church, two-story brick dwelling, 34 by 72 feet; cost \$7,500; Bothe & Rattermann builders. C. Wensecker, two-story brick dwelling, 20 by 50 feet; cost \$4,360; August Dicke, builder. H. Evering, two two-story brick dwellings, 33 by 50 feet; cost \$4,600; Hartmann & Debus builders. Mrs. L. Bauman, two-story brick dwelling, 24 by 34 feet; cost \$4,500; McCormick & Son builders. L. Orapka, two-story brick dwelling, 23 by 54 feet; cost \$4,000; W. C. Papp, builder. C. & K. Lucke, two two-story brick stores and dwellings, 35 by 53 feet; cost \$4,500; F. Alt, builder. J. Pauly, two-story brick dwelling, 43 by 56 feet; cost \$12,000; A. Uhri, builder. Dr. A. K. Hartmann, two-story brick dwelling, 25 by 92 feet; cost \$5,000; Bisser Bros., builders. G. Hein, two two-story and mansard brick dwellings, 47 by 72 feet; cost \$5,000; A. McAllister, builder. M. P. Wichenden, two-story brick dwelling, 27 by 50 feet; cost \$4,500; E. C. Sanderson, builder. A. L. Paul, two two-story brick dwellings, 38 by 68

feet; cost \$9,000; sub-let. A. Griesedick, three-story brick brewery, 44 by 40 feet; cost \$5,000; sub-let. J. Beattis, two-story brick dwelling, 42 by 65 feet; cost \$7,500; Thompson & Vallery builders. Union R. R. Co., one-story brick and iron car shed, 63 by 250 feet; cost \$5,000; Wm. Cochran builder. T. J. Toomy, two-story brick dwelling, 23 by 24 feet; cost \$1,000; E. C. Horn builder. H. Wolke, two two-story brick dwellings, 36 by 56 feet; cost \$4,800; B. Koesters builder. M. Stoltmann, three-story brick dwelling, 21 by 67 feet; cost \$4,600; Bothe & Raitemann builders. Mutual House Building Co., two two-story brick dwellings, 32 by 51 feet; cost \$4,500; J. V. Mayors builder. A. P. Ghio, two-story and mansard brick dwelling, 24 by 70 feet; cost \$8,000; S. C. McCormick builder. J. H. Tiemeyer, three-story brick dwelling, 20 by 90 feet; cost \$4,700; P. Richers builder. T. Faranbach, two-story brick dwelling, 23 by 50 feet; cost \$4,000; O'Mally Bros. builders. J. J. Ostermann, two-story brick dwelling, 24 by 56 feet; cost \$7,000; Hermann & Co. builders. W. M. Gautry, six-story brick store building, 29 by 120 feet; cost \$30,000; sub-let. H. Siegnest, two-story brick dwelling, 35 by 56 feet; also two-story brick stable, 28 by 38 feet; cost of whole improvement, \$12,000; J. Hill builder.

St. Paul, Minn.—Architect J. C. Carter reports: For Mrs. A. T. Root, two-story frame dwelling, 36 by 64 feet, at Hamline; cost \$5,000. For J. W. Crosson, two-story frame, double store and dwelling, 44 by 44 feet, on Dale street; cost \$2,500.

Architect A. M. Radcliff reports: Plans being prepared for frame dwelling, 24 by 48 feet; cost \$3,500. Also frame dwelling, 28 by 50 feet; cost \$4,500.

Architect Geo. Laurent reports: For Wm. H. Colter, two and one-half story frame dwelling, 30 by 40 feet; cost \$3,000. For August Adams, two-story brick store, 27 by 58 feet; cost \$3,000. For Andrew Schlaets, two-story brick dwelling, 40 by 50 feet; cost \$3,500.

Architects Knight & Neuhausen report: For A. Hahn, two-story brick dwelling; cost \$9,000.

Architects Teltz & Joy report: For John Teltz, two-story frame residence; cost \$4,700.

Architect W. F. Thompson reports: For B. Davis, at Union Park, two-story frame dwelling, 28 by 46 feet; cost \$2,500.

Architects Bergman & Fischer report: For John Hermann, two-story brick veneered dwelling, 40 by 50 feet; cost \$3,200. For H. Schroeder, two-story frame, double dwelling, 38 by 40 feet; cost \$4,000. For M. Peterson, two-story frame dwelling, 22 by 32 feet; cost \$3,000. For John Hammer, two-story brick veneered store and dwelling; cost \$3,500. For H. Meyerchling, three-story brick dwelling; cost \$6,000.

Architect H. Sackville Treherne reports: For J. F. Spranger, at Recreation Park, two-story frame dwelling; cost \$3,500. For M. Ellis, on Seventh street, three-story brick store and office building, 25 by 90 feet; cost \$9,000.

Terre Haute, Ind.—Labor troubles seem to have effectually stopped the progress of building in this city, and it is expected that very little will be done this season.

Architect W. H. Floyd has prepared plans for remodeling dwelling of Geo. Faris.

Architect J. W. McLean is building a \$2,600 dwelling for Patrick Burke.

Dr. Winstern is erecting a \$2,600 dwelling, 30 by 50 feet. No architect employed.

Tiffin, O.—Architect F. K. Hewitt reports: Remodeling of Baptist Church, new round tower, slate roof, galvanized iron coping, copper finials, elevated organ loft and gallery, paneled ceiling enriched with blue and gold; cost about \$4,500.

Architects E. O. Fallis & Co., of Toledo, O., report: For R. H. Baker, brick residence; cost \$9,000; under way; John W. Lee, builder.

Toledo, O.—Prospects for building in this vicinity are not above the average of former years.

Architects E. O. Fallis & Co. report: For city of Toledo, Warren School, twelve-room building; cost \$30,000; under way; A. Buelley, builder. Illinois School, eight-room building; cost \$14,000; under way; John Cavinaw, builder. North Toledo School, four-room building; cost \$9,000; under way; John Cavinaw, builder. For Calvin Barker, brick dwelling; cost \$7,000; projected. For H. Rensler, frame dwelling; cost \$2,500; under way. For John Kinnan, frame residence; cost \$12,000; under way; E. Freund, builder. For W. B. Schafer, frame dwelling; cost \$2,000; projected.

Architect F. K. Hewitt, of Tiffin, O., reports: For David Harpster, two-story double store building, 42 by 80 feet, brick and cutstone, tin roof; cost \$5,000; drawings just completed.

Architect C. A. Weary, of Chicago, Ill., reports: For E. D. Moore, six two-story dwellings, pressed brick and blue Bedford stone fronts; cost \$20,000.

Washington Heights, Ill.—Architect C. H. Gottig, of Chicago, reports: For A. Behrens, frame store and hall building, 26 by 82 feet; cost \$6,500; I. Hecht contractor.

Waterville, O.—Architects E. O. Fallis & Co., of Toledo, O., report: For College of Ursuline Sisters, brick college building; cost \$40,000; projected.

Waukegan, Ill.—Architect W. W. Boyington, of Chicago, reports: Masonic Hall building, 36 by 80 feet, pressed brick and stone, steam heat; cost \$10,000.

Wheeling, W. Va.—Building outlook is not at all encouraging; owners confining their improvements to necessary repairs. The depression is owing to continued labor troubles.

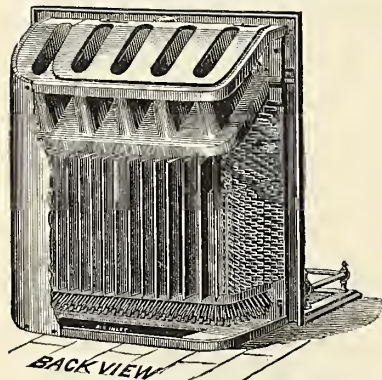
Architect Chas. P. Hamilton, reports: Court house for Ohio county, W. V.; building was formerly state house, previous to removal of the seat of government to Charleston; the city of Wheeling has completed alterations, repairs, etc., to the amount of \$12,000 on the south end, and the county has contracted for similar work on the north end, to cost \$20,000; building is 216 by 108 feet; improvements under way; Kleves, Kraft & Co., of Wheeling, contractors. For Geo. W. Johnston's Sons and Alexander Laing, remodeling business fronts, etc., four-story block at 1,224 and 1,226 Main street; cost \$8,000; projected.

Winnetka, Ill.—Architects Edbrooke & Burnham, of Chicago, report: For Congregational Society, brick and frame church building, 52 by 68 feet; cost \$5,000; John Morton, contractor.

Wilmington, N. C.—The county jail building and a number of residences and stores were destroyed by fire. Loss estimated at \$25,000.

Yankton, Dak.—The outlook is good, although nothing has been started as yet. A stock company has recently been formed to light the streets by electricity.

Architect Albert E. Cobby reports: For the Masonic Order, three-story brick Masonic temple, 75 by 100 feet; cost \$25,000; projected. For I. O. O. F., three-story brick Odd Fellows' hall, 50 by 88 feet; cost \$20,000; projected. For Ward & Miner, three two-story stores, 75 by 100 feet; cost \$15,000; projected. For J. H. Teller & Co., three two-story stores, 75 by 100 feet; cost \$15,000; projected. For H. F. Jencks & Son, brick hotel, 50 by 100 feet; cost \$20,000; projected. For J. F. Shaw, brick residence; cost \$3,000; projected. Just completed remodeling mill for Excelsior Mill Co.; cost \$12,000. Also, have several small dwellings under way.



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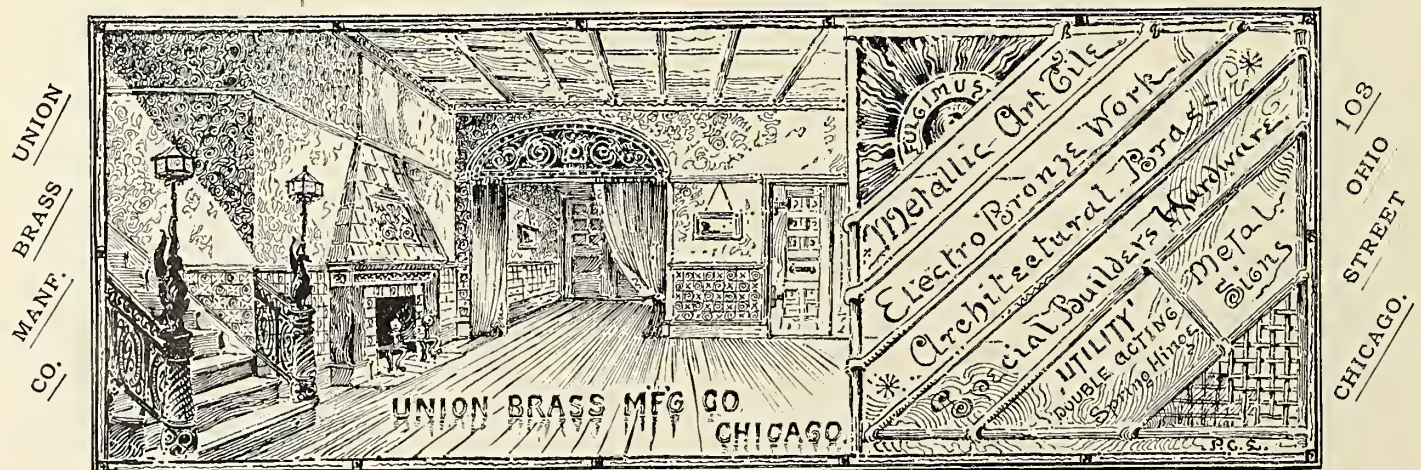
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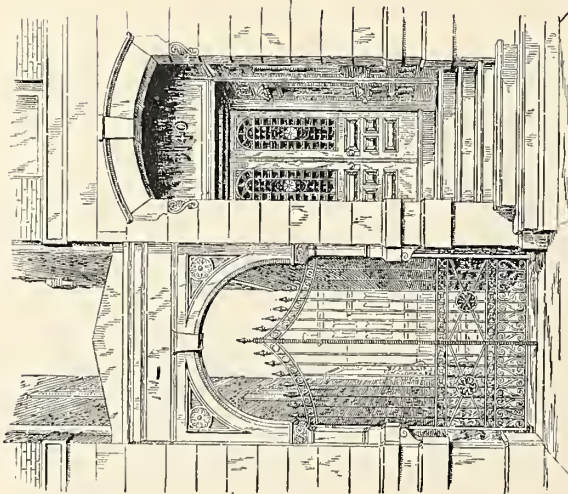
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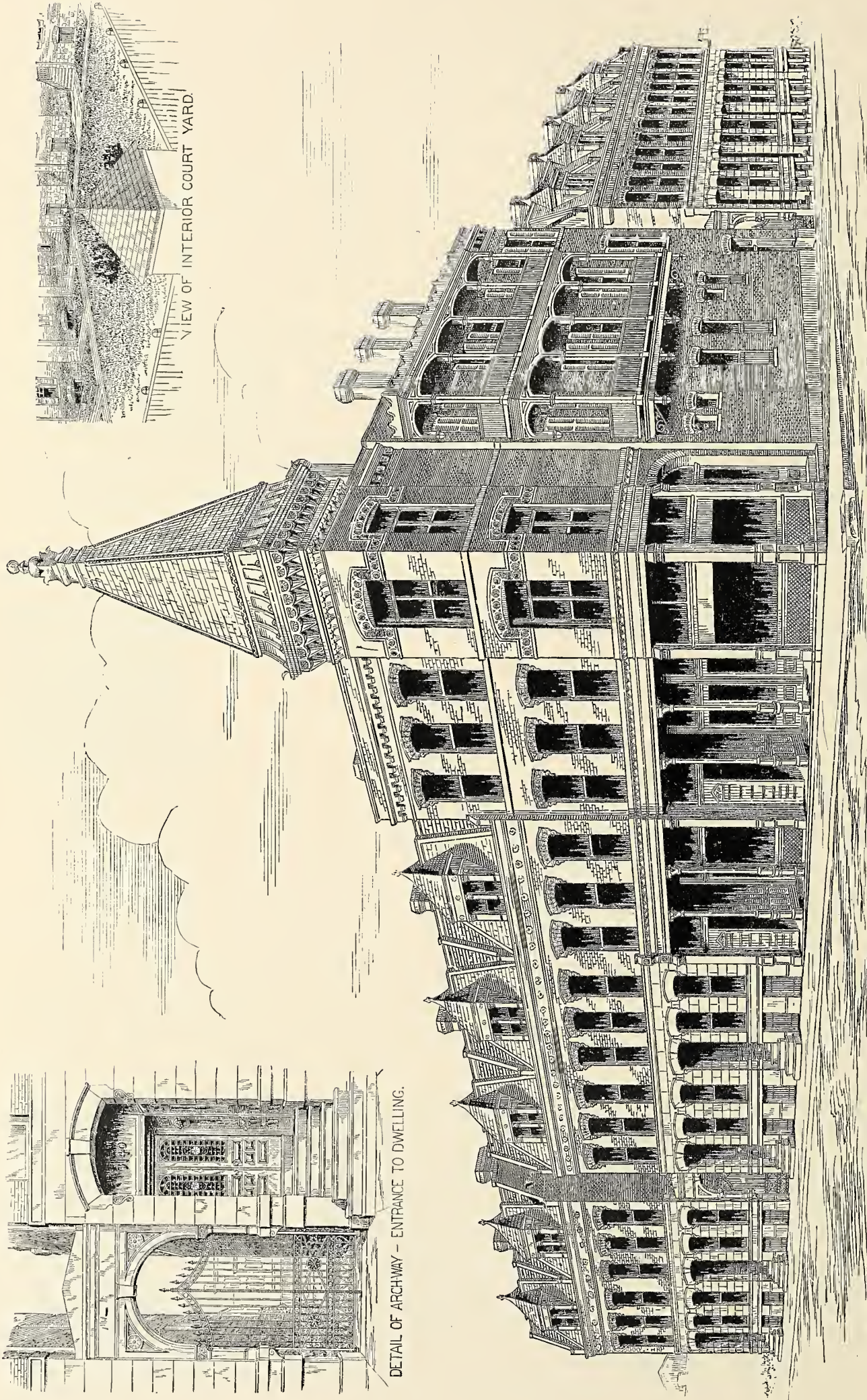
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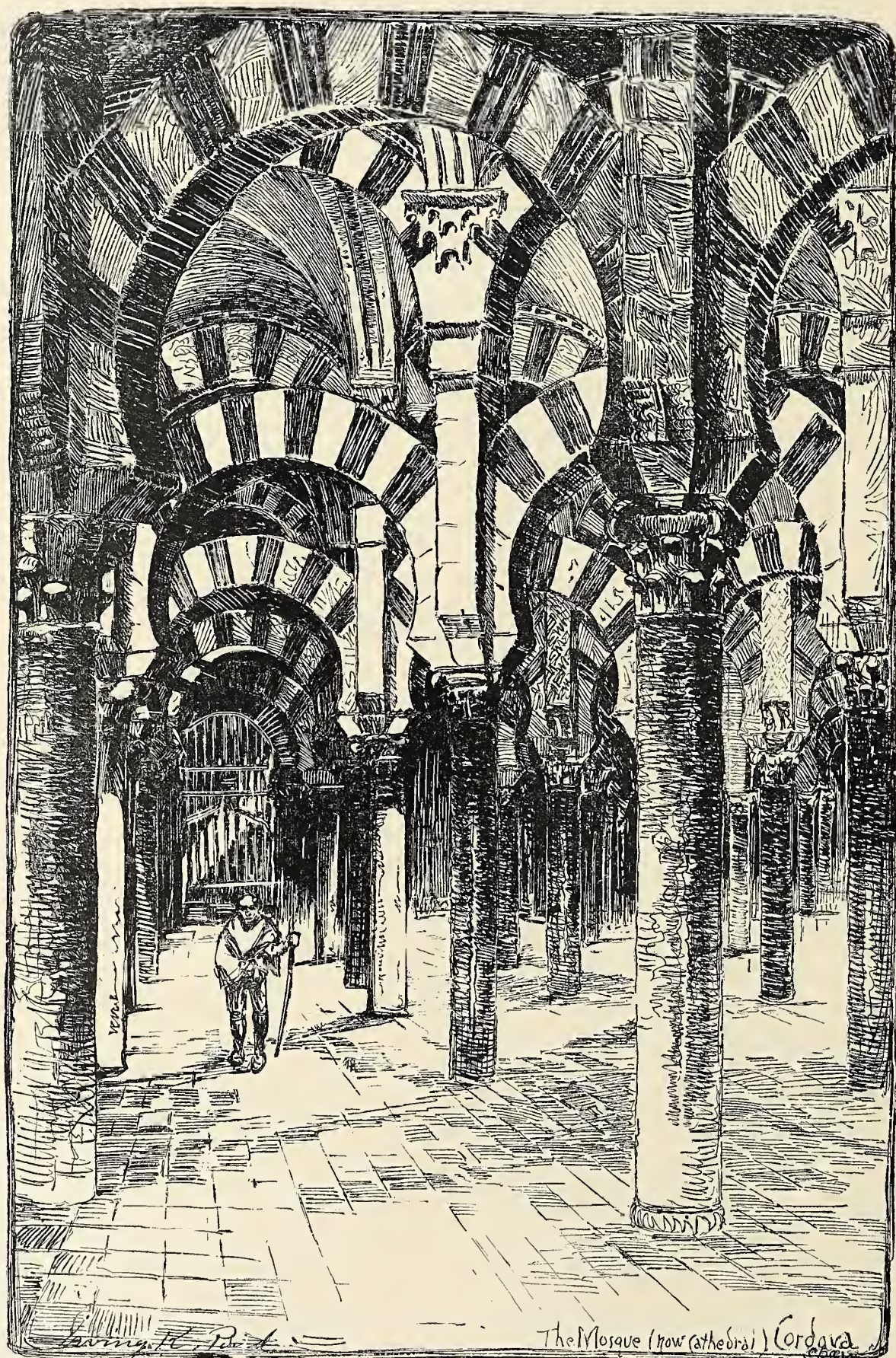


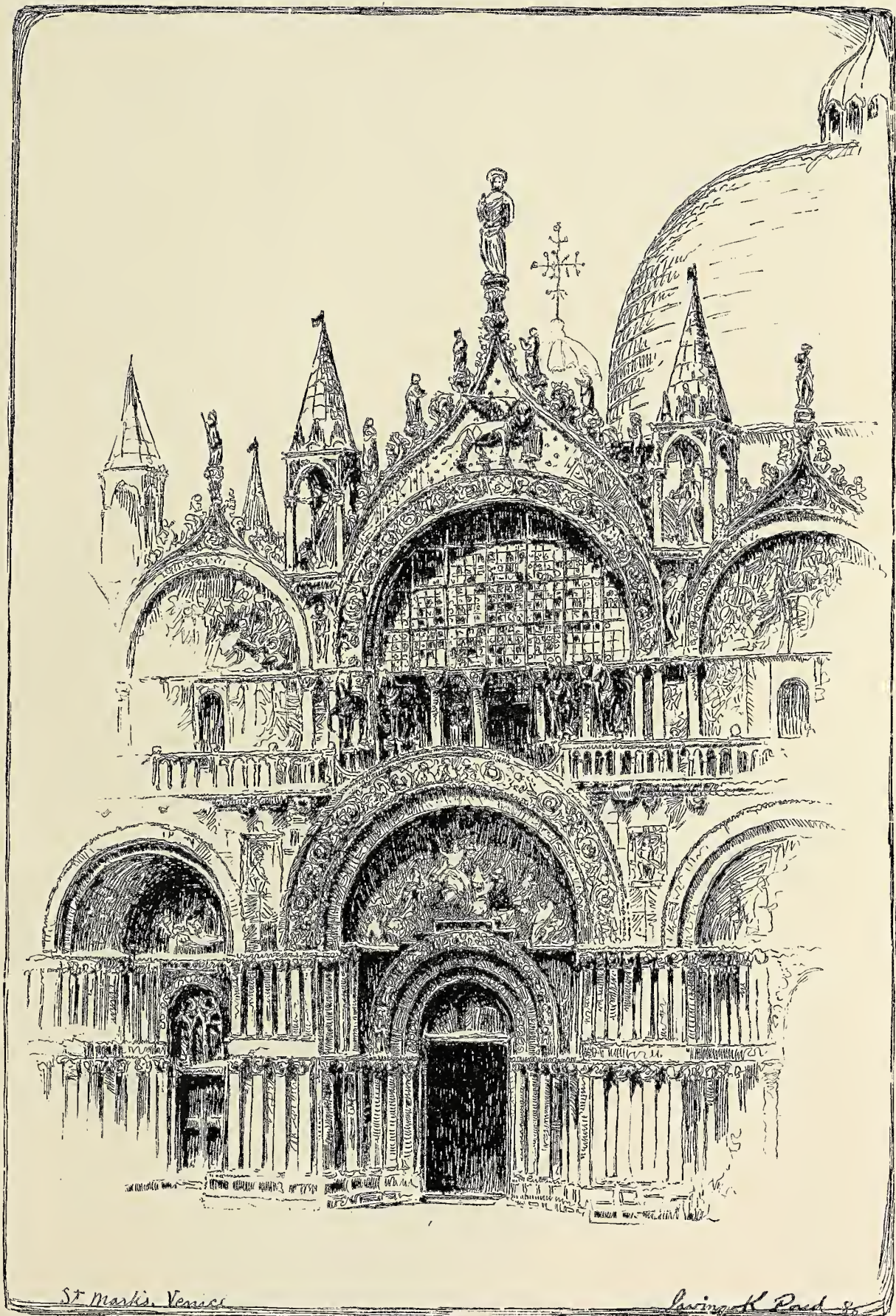
DETAIL OF ARCHWAY - ENTRANCE TO DWELLING.



VIEW OF INTERIOR COURT YARD.

FRANCIS D. LEE ARCH'T. * ROW OF 10 DWELLINGS, STORES & FLATS FOR MR. THEOPHILE PAPIN. * COMPLETED BY ALF. F. ROSENHEIM. ARCH'T.
ST. LOUIS, MO.

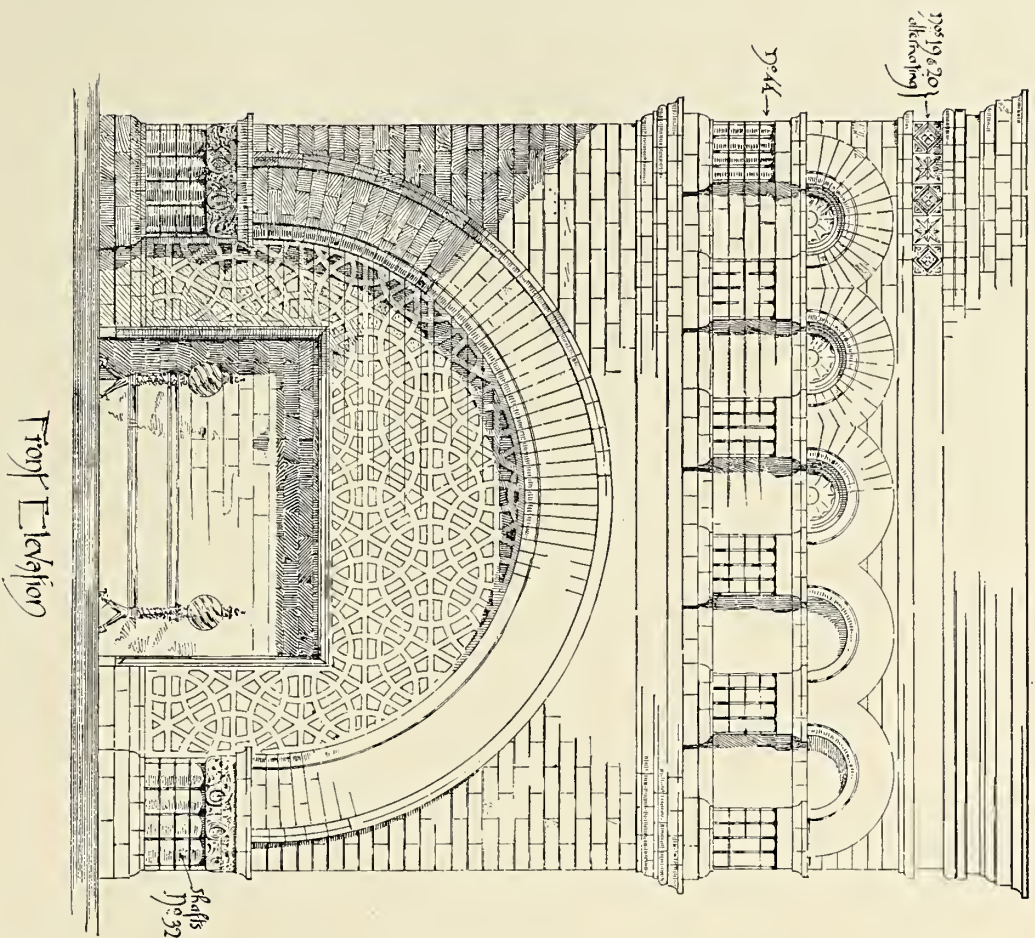




St. Mark's Venice

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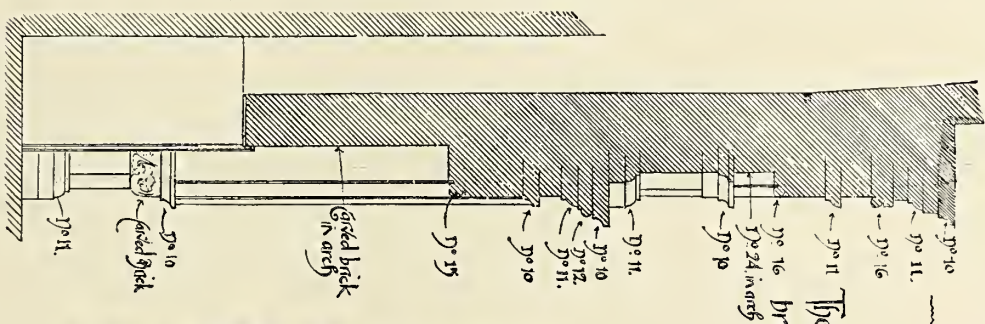
Living K. Paul
Inland Architect and Builder Print.



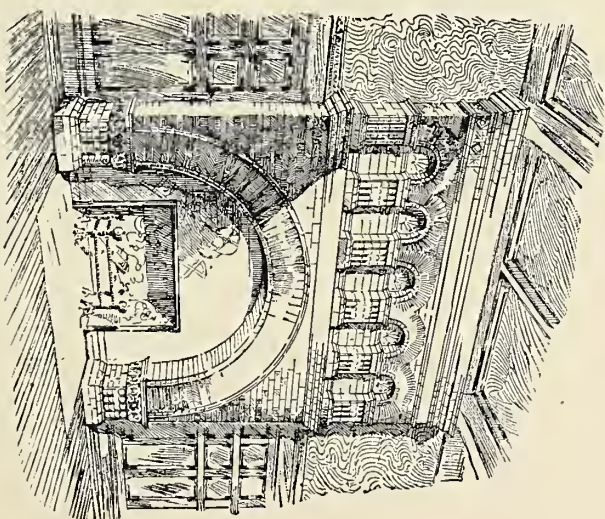
From Elevation



Side Elevation
Scale 1 inch = 1 foot.



Section

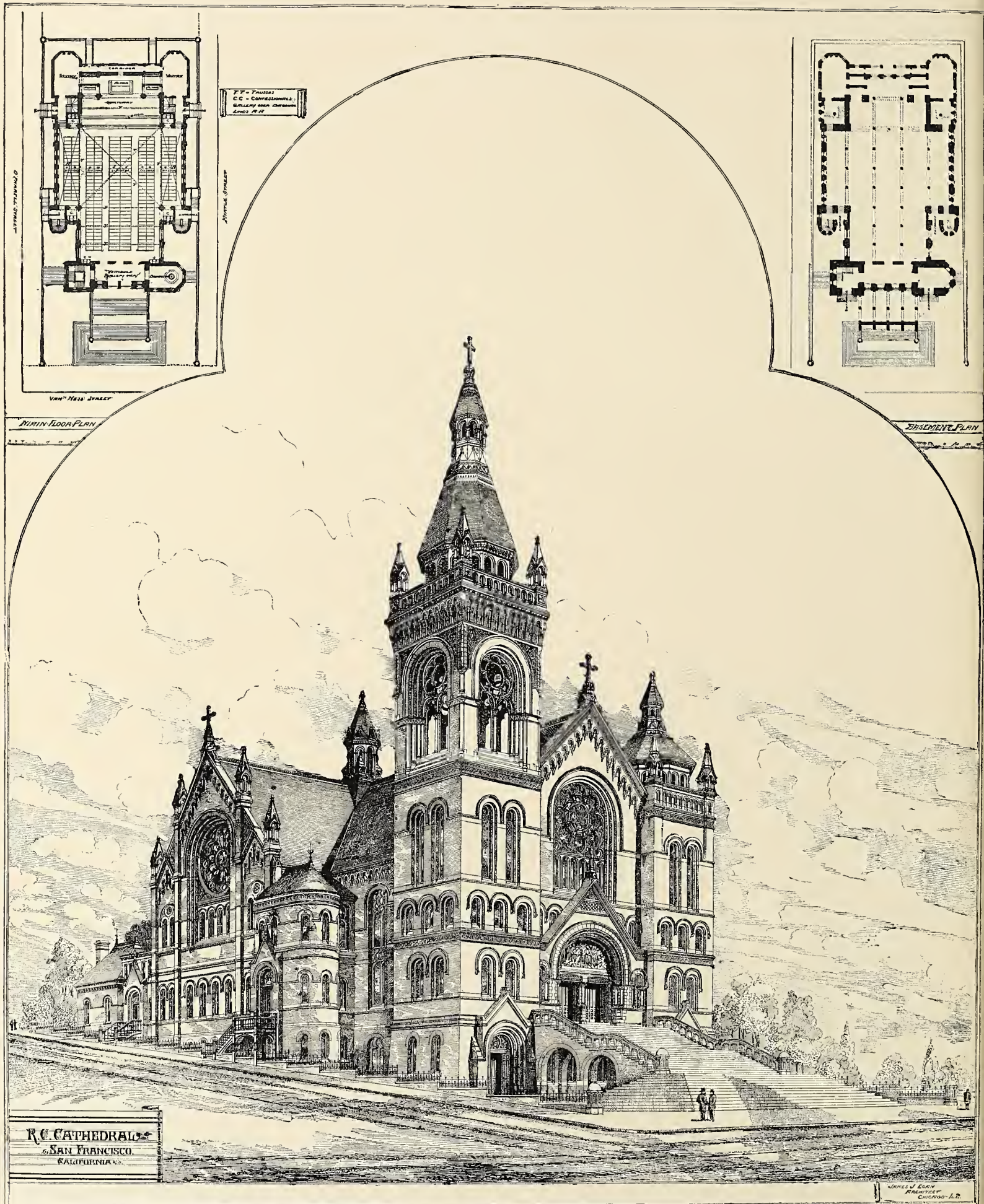


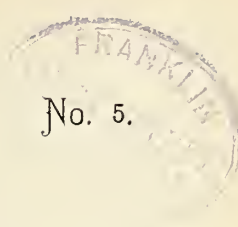
Perspective Sketch

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Inland Architect and Builder Print.

Design for a Brick Mantel
— by HARRY LAWRIE. —
The numbers refer to moulded
brick in J. Lewis Pressed Brick Company's catalogue.





Sketch of Residence I. H. Clark Esq.
Prairie Ave Chicago



Entered at the Postoffice at Chicago as second-class matter.

A MONTHLY JOURNAL
(With an INTERMEDIATE NEWS Number)
DEVOTED TO WESTERN INTERESTS.

OFFICIAL ORGAN OF THE
WESTERN ASSOCIATION OF ARCHITECTS.
(A NATIONAL ORGANIZATION.)

VOL. VII.—No. 6.

CHICAGO, APRIL, 1886.

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INTERMEDIATE NEWS NUMBER,

DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

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THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

THE following circular letter has been sent out to the architects of the state of Nebraska, and a full attendance is expected:

To the Architects of the State of Nebraska:

OMAHA, NEB., April 9, 1886.

GENTLEMEN.—There will be a meeting of the architects of the state of Nebraska in St. George's Hall, opposite the Paxton Hotel, in this city, at ten o'clock A.M., Friday, April 23, 1886, for the purpose of organizing a Nebraska State Association of Architects, whose object shall be to work in harmony with the Western Association of Architects in the endeavor to raise the standard and advance the interests of the profession. All who are engaged in the planning and supervision of buildings are earnestly requested to attend, and to send a reply to the undersigned of their intentions in this matter.

SIDNEY SMITH, Architect, Omaha, Neb.,
Member of the Executive Committee, Western Association of Architects.

No architect in regular practice in the state should allow anything but the most pressing business to keep him from attending this meeting, the good already done by the state associations already formed showing how valuable as well as necessary the formation of a state association is.

IN our February number we spoke somewhat forcibly of the practice of architects contributing their services gratuitously, and as an example mentioned a case in a western city where architects had done this for a Y. M. C. A. building. Architects in a western city have written to us, defending their position in a similar case, supposing reference was made to them. They offered to contribute financially, but the society preferring to receive an equivalent in services, made such a proposition, which was agreed to, which, from a professional standpoint, was allowable. The editorial was not intended to illustrate such a case, but to show the bad policy of gratuitous contributions of services in ordinary cases.

Association Notes.

CHICAGO MASTER CARPENTERS AND MANUFACTURERS.



AT a called meeting, April 1st, the principal business was the appointment of a committee of three, Messrs. William Grace, Julius Meyer and S. H. Demsey, to meet a committee of journeymen carpenters to exchange views upon the eight-hour question. Three new members, Messrs. C. H. Pallyer & Co., Duncan Cameron and Francesco Blair, were reported by the committee on membership.

At the regular meeting of the association on the 20th inst., President Frost occupied the chair. The principal business was the reception of the report of the committee appointed to confer with a committee of the journeymen carpenters, which was presented by Mr. Grace.

The report stated that the committee had met a committee which represented three associations of carpenters and of from 2,000 to 3,000 members. That committee was of the positive opinion that, after May 1, eight hours would constitute a day's work. They also recommended that a committee of arbitration be appointed. They said nothing definite about wages, but intimated that 30 cents per hour until November 1 would not be objected to. The report was

accepted and placed on file. In the discussion which followed, it was developed that it was in no wise certain that that committee represented a large body of carpenters, but the matter of eight hours as well as the rate of wages should be carefully considered by the master carpenters and definite action taken.

The mill men were unanimous in the statement that there was an over-production in sash, doors and blinds, and that the mills could run on odd sizes alone for the next four months. It was estimated that almost every mill had from 15,000 to 35,000 doors on hand.

The discussion was general, and the following resolution, presented by Mr. Hearson, was adopted:

Resolved, That it is the sense of this association that we are willing to adopt eight hours as a day's work after May 1.

Mr. Wm. Grace made the following motion, which was adopted:

Resolved, That the sense of this meeting be communicated to the Society of Carpenters through D. Ross, their secretary.

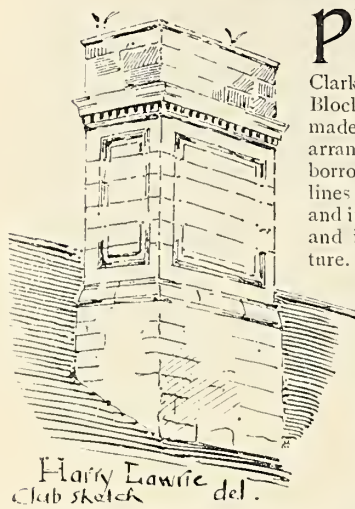
The following names were added to the roll of members: Rees Bros., stair builders; John Stut and John Sherman; after which the meeting adjourned.

A SOCIETY OF CANADIAN ENGINEERS.

After several ineffectual attempts during the past five years, a movement is now fairly established for the organization of a society of engineers for the whole Dominion of Canada. Meetings were held last month in the three large cities of Toronto, Montreal and Ottawa, which were well attended by the leading engineers of each district. Local committees were appointed, who are at work on the draft of the constitution; a meeting of delegates will be held at Ottawa, about the 28th inst., to settle on

the constitution and by-laws, and a general meeting will be called immediately after to ratify the same. The movement was inaugurated by Mr. Alan Macdougall, M. Inst. C.E. Eng., sanitary engineer of Toronto, who is examiner of civil engineering in Toronto University, and the successful issue of the movement is greatly due to his energy and perseverance.

Our Illustration.



PLANs and elevation of a frame residence for A. F. Nightengale, at Ravenswood, Ill., Cockingham and Clarke, architects, room 74, Metropolitan Block, Chicago. The architects have made a departure in both the plan, arrangement and in the exterior design, borrowing from the Chinese the curved lines as effected by the Chinese architects, and introducing it into the exterior design and interior arrangement of their structure. Though the Chinese know little of classic architecture their styles of work contain wonderful grace and beauty. The house will have twelve rooms, and with the exception of a kitchen in the rear, each room will be irregular in shape, with a general octagonal outline. The central ground plan is in the form of a Maltese cross, each side equal, and with a room to each division, and a large chimney in the center of the whole.

The mantel and fireplace in each room will thus be in the center of the house, the four encircling the central chimney. Folding doors enabling all the rooms to be thrown into one, except the kitchen. In the two front angles of the cross, $22\frac{1}{2}$ degrees from the center, the two entrances are located, both exactly alike. The most striking peculiarity of the house will probably be its lack of halls, which are only found in two places, and here not large. Entering from the front, the visitor ascends four or five steps and passes through the outer door to a little vestibule. This leads directly into two apartments, one on either hand. Then one passes through either apartment to the apartment beyond, the only connections between the four rooms being the double doors in the walls. One of the rear of these four apartments has a door to the kitchen and the other a door to the stairway. The connections in angles of the cross, it will be observed, give the building a circular appearance on the outside. There will be no gables, but each section of what would otherwise be a gable, goes upward into a convex and tapering form, ending in a point near the roof. A portion of the outer adornment would be Queen Anne gables if each Queen Anne gable did not take the shape of a Chinese parasol. The plumbing and bath-rooms are arranged in the center of the building. The cost of a building of this kind, the architect says, is hardly anything over that of the ordinary style for the same amount of accommodation. The principal difference lies in the fact that more skilled labor will be needed, there being so many curves and ornaments. The cost will be about \$5,000. The architects have several other houses the same in style, in preparation.

Synopsis of Building News.

Battle Creek, Mich.—At the election April 6, the question of bonding the city for \$100,000 for the construction of water works, received 1,282 votes in its favor, out of only a total vote of 1,700.

Cedar Falls, Iowa.—The legislature has appropriated \$25,250 for the State Normal school in this city.

Charlotte, Mich.—Architects E. E. Meyers & Son report: For J. L. Dolson, brick and stone dwelling; cost \$7,500.

Chicago.—The situation remains unchanged in regard to the labor question, the journeymen all being confident that May 1 will bring a reduction of hours, and the "bosses" having as little to do with the agitation as possible; but when asked to declare their intentions readily assent. The question of wages, while being the real sequence to the eight-hour movement, is but little discussed, the unions saying they will not ask an advance at present, and the probability is that they will as soon as it seems at all likely a "raise" can be obtained. The fact is, that in all branches of building skilled workmen are always in demand at good wages, and, judging from the committees who represent the journeymen, the agitation is almost entirely in the hands of unskilled and ignorant agitators, usually of foreign birth, who do not in any way represent the skill or intelligence of the American workmen. As was stated in the previous edition, neither workmen or employers can afford a strike, and but little disturbance, if any, will occur May 1.

Architects Burling & Whitehouse report: Taking figures on residence for S. A. Brown, to be erected on the corner of Michigan avenue and Twenty-sixth street; it will be in the Flemish style, 52 by 80 feet, built of Middlesex stone; cost, \$50,000. For E. B. Sheldon, brick and stone store building, 50 by 100 feet, on Michigan street, seven stories high, to be built of brick and stone; cost, \$40,000.

Architect Julius H. Huber reports: For John Pauly, three-story store and flats, corner of Twenty-second street and Archer avenue, Trenton pressed brick, stone and terra-cotta trimmings; cost, \$14,000.

Architect S. V. Shipman reports: For the Alexander Brand estate, additions, repairs, etc., to stone front building, 44 Clark street; cost, \$82,000. For J. H. Braynard, three-story store and flat building, Anderson pressed brick, stone trimmings, on Ogden avenue, near Adams street; cost, \$13,000. Also for same, two-story dwelling on Adams street near Ogden avenue, pressed brick, stone trimmings; cost, \$8,000; all under way.

Architect W. W. Boyington reports: For Wm. Miller, three-story flat building, pressed brick, galvanized iron trimmings, all modern improvements; cost, \$10,000. Also preparing plans for alterations in Monroe Heath's residence, at Arlington Heights; cost, \$8,000.

Architects Edbrooke & Burnham report: For Leavitt Street Congregational Church, rock-faced, lime stone church building, 84 by 84 feet, seating capacity 800; cost \$20,000; open for bids. For Campbell Park Church, Indiana pressed brick, with rock faced stone front church building, 75 by 90 feet, seating capacity, including gallery, 1,000; cost \$25,000.

Architect W. H. Thomas reports: For S. L. Wood, three-story and basement, brownstone front residence, 21 by 52 feet, on Monroe street near Hoyne avenue; cost \$8,000.

Architects Holabird & Roche report: For W. D. Walker, two-story store building 80 by 110 feet, on southwest corner of Wabash avenue and Van Buren street; cost \$20,000; contracts let.

Architect Oscar Cobb reports: For F. P. Owens and H. J. Goldy, three-story store and theater building, 130 by 150 feet, on North Clark street and North avenue, pressed brick with terra-cotta and galvanized iron trimmings; cost \$75,000.

Architects J. M. Van Osdel & Co. report: Have prepared plans for a five-story and basement apartment building, 130 by 91 feet, to be erected on corner of Indiana avenue and Twelfth street. There will be a large dining room on the first floor, the balance of the building being divided into suits of two rooms. It is intended to have all modern improvements. The building will cost about \$60,000. Contract for the stone work on the new Memory building has been let to Mr. John Reed late Tomlinson & Reed. The stone work was figured first, as the stone to be used is Wyoming Valley bluestone, and must be shipped from the quarries. For J. Holliday, block of seven three-story and basement stores and flats, on Adams street near Halstead; cost about \$28,000.

Architect C. C. Miller reports: For L. Seaman, two-story and basement residence, on Calumet avenue; to cost about \$7,000; plans under way.

Architects Ostling & Baurgeois report: For Chas. Williams, frame dwelling to be erected in Lake View; cost \$10,000; plans under way.

Architect G. Vigeant reports: For the Fergus Printing Co., five-story and basement brick building, 25 by 99 feet, to be erected on the corner of Dearborn avenue and Illinois street; cost \$15,000.

Architect Clifton J. Warren reports: For A. C. Ware, brick residence; cost \$8,000; furnace heat. For E. C. Delamater, three brick houses; cost \$14,000.

Architect T. V. Wadskier reports: For Mrs. Charles Pape, two-story and basement and attic residence, 25 by 75 feet, Michigan avenue and Twenty-ninth street, brick with stone and terra-cotta trimmings, slate roof, steam heat, also barn; cost \$15,000. For Arthur Orr, two three-story store and flat buildings, 40 by 100 feet, Thirty-ninth street and Indiana avenue, pressed brick with stone and terra-cotta trimmings, all modern improvements; cost \$20,000. For Chas. Hutchinson, six three-story flat buildings, 20 by 60 feet, on Twenty-ninth street, all modern improvements; cost \$35,000.

Architects McAfee & Lively report: For P. C. Hearthy, three-story and basement, stone front apartment house, 24 by 55 feet, at 514 West Fourteenth street; cost \$6,000.

Architect C. A. Weary reports: For H. W. Martin, two three-story and cellar flats, 50 by 70 feet, on Sangamon near Madison street, pressed brick with stone, terra-cotta and galvanized iron trimmings; cost \$12,000.

Architect D. S. Pentecost reports: Just let contracts for two-story and basement flat building, 25 by 78 feet, to be erected at 625 West Jackson street for Dr. O. J. Price, St. Louis pressed brick front, with Connecticut brownstone and Quincy granite trimmings and rock-faced basement; there will be a handsome front porch built of stone and granite; the flats will be finished in first-class style with the latest improvements, including electric bells and speaking tubes throughout, separate furnace and laundry to each flat, tiled floors in halls, eight wash bowls, six onyx and hardwood mantles and hammered brass gas fixtures; the plumbing will comprise all the latest sanitary improvements; cost \$10,000. For Mrs. A. St. Clair, finishing two upper stories of dwelling, at 205 Chestnut street; cost \$2,600.

Architect W. L. Carroll reports: For L. H. Fluke, two-story frame dwelling, 50 by 36 feet; cost \$5,500; also, same for C. H. Crane.

Architect P. W. Reuhl reports: For Philip Bartholomay, two-story and basement rock-faced and cutstone front residence, 25 by 60 feet, hot water, heat, etc.; cost \$10,000; taking bids. For C. Hoffman, double two-story flat building, 28 by 50 feet, on Centre avenue, near Thirteenth place, pressed brick with stone trimmings; cost \$8,000.

Architect Alfred Smith reports: For J. L. Loveday, three-story and basement brick and stone dwelling, 20 by 65 feet, on West Monroe street, near Oakley avenue; cost \$6,000. Also, three-story and basement dwelling, 29 by 67 feet, adjoining the above; cost \$10,000.

A permit has been issued to the West Division Railway Company for the erection of a two-story stable, 269 by 152 feet, and a one-story car barn, 352 by 114 feet; cost \$100,000.

Cincinnati, Ohio.—Reported by Lawrence Mendenhall: Matters here are more or less in *statu quo*, the unsettled weather having its effect upon building projects, although of course many contractors are hurrying along their work, for the prospects for a good busy season are most flattering. Ground has been broken for the new bank building, Second National Bank, Derby, Alms & Doepke, and other prominent structures, while our streets are being torn up to make room for the granite pavements.

Architect Gustave W. Drach reports the following: Residences for Mrs. D. H. Mears, three in number, built of frame, stone and brick, two and one-half stories high and containing eight rooms each; cost \$12,000. For John Herwig, Esq., a frame house of eight rooms, two and one-half stories; cost \$5,000.

Architect Sam'l Hannaford reports: For Jno. A. Caldwell, Esq., a stone residence of ten rooms, cement gables, and slate roof. For John A. Simpkinson, Esq., a six-story stone front store, tin roof, size 35 by 80 feet. Stable for American Express Co., two and one-half stories high, built of brick, size 50 by 100 feet. Brick candy factory, five stories high, 68 by 130 feet, for P. Ebert & Co. For the Middletown Paper Co., a two-story brick mill, 75 by 120 feet. For C. S. Handy, Esq., Vevay, Ind., a brick store, two stories high. A fine residence for A. E. Burkhardt, Esq., two and one-half stories high, of dressed stone, slate roof, containing eighteen rooms, all hardwood finish.

Architect Geo. W. Rapp, reports: For Jos. G. Buddeke, Esq., a five-story stone store building, with tin roof; cost \$10,000. For Wm. P. Hulbert estate, a five-story pressed brick store, having two stories, open iron front; cost \$10,000.

Architect E. Anderson reports: Drawings and specifications finished and buildings in progress of erection in Cincinnati, as follows: Mabley & Carew, store fittings; Mosler Safe and Lock Co., four-story factory; G. Garbaldi, three-story store and residence; Macneale & Urban, vault work for Metropolitan Bank; Chas. A. Miller, additions to residence; M. White, additions to store buildings; Cincinnati Exposition structure. For Phil. N. Moon, Olympia, Ky., additions to residence. Present engagements embrace a five-story store building and a block of eleven residences, averaging ten rooms each.

Coldwater, Mich.—Fair amount of building being done, all good mechanics are busy.

Architect M. H. Parker reports: Contract let for the Library building (previously mentioned), has been let to E. B. Sexton, for \$10,000. This does not include heating, gas fixtures or plumbing.

Architects E. E. Meyers & Son, of Detroit, Mich., report: For J. Kitchen, brick store building; cost \$4,000.

Decatur, Ind.—Architects Wing & Mahurin, of Fort Wayne, Ind., report: For R. B. Allison, three-story brick hotel building, 42 by 120 feet, stone and galvanized iron trimmings, tin roof; cost \$12,000; plans completed.

Denver, Col.—Architect F. C. Eberley, reports: For Th. Lang & Co., Rocky Mountain Brewery, three and five-story building, 242 by 65 feet, brick, stone and iron; cost \$82,000; nearly finished; A. Halenberg, mason; Hallock & Howard, carpenters.

Des Moines, Iowa.—Architect A. M. Rouse reports: For A. G. Cramblitt, fourteen-room frame residence, hardwood finish, electric bells and lighting, furnace heating, stained glass, etc.; cost about \$8,000; now finishing.

Detroit, Mich.—Present condition very active and outlook splendid.

Architect Spier & Rohns report: For R. N. Hall, block of five two-story brick and stone dwellings, 100 by 60 feet; cost \$11,000; Wm. Brennan, builder. For Valentine Geist, block of three three-story brick and stone stores, 62 by 56 feet; cost \$10,000; Rich & Bagell, masons, L. Rehberg, carpenter.

Architect Gordon W. Lloyd reports: For the Strong Estate, five-story double store building, 40 by 100 feet, brick and terra-cotta; cost \$15,000; W. G. Vinton & Co., builders. For Schloss Bros., alterations to stores at 154-156 Woodward avenue; Richard Helson, contractor.

Architects Wm. Scott & Co. report: For Detroit Stove Works, four-story brick addition, 80 by 14 feet; cost \$10,000; Henry Carew, mason; Alex. Gray, carpenter. For Geo. B. McLellan, two-story frame dwelling, slate roof, 30 by 58 feet.

Architect Mortimer L. Smith reports: For A. Ross, three-story double dwelling, 47 by 52 feet, brick, stone trimmings, slate and gravel roof; cost \$12,000; F. Julien & Co., builders. For Thos. Barlum, block of three two-story frame dwellings, 62 by 62 feet, shingle roof; cost \$6,500; W. H. Traves, carpenter; Lloyd & Flewelling, masons.

Architect C. A. Preston reports: For C. K. Backus, two-story dwelling, 25 by 50 feet, brick, stone trimmings, slate roof; cost \$3,500; Pinney & Price, masons; W. H. McCausland & Son, carpenters.

Architects Mason & Rice report: For Mrs. Emmons, two-story dwelling, 35 by 70 feet, brick, stone trimmings, slate roof; cost \$6,000; H. Carew, builder. For H. M. Dean, three-story dwelling, 26 by 48 feet, brick, stone trimmings, slate and gravel roof; cost \$6,000; E. Mayhew & Son, builders.

Architect Walter McFarland reports: For C. Berdan, two-story residence, 36 by 50 feet; barn 25 by 28 feet, brick, stone trimmings, slate roof; cost of improvement \$8,000; H. Carew, mason; Stevens & Co., carpenters. For John Lynch, three-story double dwelling, 40 by 68 feet, brick, stone trimmings, slate roof; cost \$3,000; John Finn, builder. For Wm. O'Leary, two-story frame dwelling, 27 by 44 feet, Stevens & Co., builders.

Eldora, Iowa.—The Legislature has made an appropriation of \$8,750 for the Eldora Industrial School.

Florence, Wis.—The iron works at this place were destroyed by fire April 6; loss \$50,000; insurance \$13,400.

Fort Wayne, Ind.—Present condition and outlook for building is quite encouraging. No boom is looked for, but the indications are of a steady progress of work. Contracts that have been let this year have been figured very low.

Architects Wing & Mahurin report: For Chas. McDougal, two-story brick residence, 37 by 47 feet, slate roof, cut stone and Milwaukee brick trimmings; also barn; cost \$4,500; Pressler & Wagner, builders. For Mrs. P. B. Collick, two-story brick residence, 34 by 54 feet, stone trimmings, slate roof; cost \$4,000; J. H. Krock, builder. For Winfield S. Bash, three-story and basement brick residence, 39 by 50 feet, cutstone trimmings, slate roof, plumbing, furnace-heating; cost \$5,000; taking figures. For James B. White, three-story brick store building, 47 by 60 feet, cut stone trimmings, tin roof; cost \$12,000. Henry C. Paul, builder.

Huntington, Ind.—Architects Wing & Mahurin, of Fort Wayne, Ind., report: For F. Dick, three-story brick store building, 22 by 76 feet, stone and iron trimmings, tin roof; cost \$4,000; under way; Jacob Arnold builder. For Jacob Dick, two-story brick and frame cottage, 32 by 53 feet, slate roof, and furnace; cost \$4,500; projected.

Independence, Iowa.—The Legislature has made an appropriation of \$40,000 for an additional cottage at the Insane Asylum, and \$26,000 for other purposes.

Kansas City, Mo.—A summary of estimated value of buildings for which permits were issued for week of the 12 to 17 April, 1886, inclusive, shows: brick residence on McGee street, for Guy Kinne, to cost \$5,500; brick residence on E. Eleventh street, for W. H. Graham, to cost \$4,000; brick business block on E. Fourteenth street, for R. M. Stewart, to cost \$5,000; brick business block on Main street, for Patrick Soden, to cost \$9,000; brick residence on Oak street, for Geo. Holmes, to cost \$12,000; brick business block on E. Eighteenth street, for Max Isaacs, to cost \$5,000; brick residence on McGee street, for Jno. E. Enebery, to cost \$4,500; brick business block on E. Fifth and Troost avenue, for D. A. Harrington, to cost \$12,000; brick residence on E. Seventeenth street, for A. H. Anstin, to cost \$6,000; brick residence on E. Seventeenth street, for A. H. Anstin, to cost \$3,500; brick residence on Garfield avenue, for D. J. Parker, to cost \$12,000; total for buildings costing \$3,000 and upward, \$76,500; under \$2,000, \$18,100; total brick buildings, \$94,600; grand summary, brick, \$94,600; frame, \$29,950; miscellaneous, \$9,750; total for week, \$133,400.

Lapeer, Mich.—Architect A. C. Varney, of Detroit, Mich., reports: For Judge Stickney, two-story frame dwelling, 31 by 65 feet; also barn; cost \$4,000; projected.

Marshall, Mich.—Architect Spier & Rohms, of Detroit, report: For C. D. Cook, two-story dwelling, 36 by 60 feet, brick, stone trimmings, slate roof; cost \$6,000. Work done by the day.

Maryville, Mo.—Architects E. E. Meyers & Son, of Detroit, Mich., report: A brick church, to cost \$10,000.

Milwaukee, Wis.—Architect C. F. Ringer reports: For Mr. Simpson, two brick houses; cost \$7,000; plans completed.

Mitchellville, Iowa.—The Legislature has made a special appropriation of \$10,350 for the girls' school at this place.

New Corporations.—The Hygienic Heater & Ventilator Company, at Chicago: capital stock, \$100,000; incorporators, Freeman Lane, James H. Gowan and Charles Lane. The Chicago Water and Fire-proof Building Material Company; capital stock, \$100,000; incorporators, Emil H. Besse, Herman Anerika and Joseph Wunizer.

New Orleans, La.—Building outlook is uncertain, with possibility of improvement.

Architect Jas. Freret reports: For Chas. A. Adams, two-story frame residence, 32 by 58 feet; cost \$8,000; under way; P. R. Middlemiss, builder. For Little Sisters of the Poor, chapel, 32 by 92 feet, and other buildings; cost \$15,500; under way; Jas. Freret, builder; under way. For John T. Gibbons, two-story frame residence, 29 by 121 feet; cost \$10,000; under way; M. Burns, builder.

Oconomowoc, Wis.—At the election, April 6, it was voted to build a city hall; to cost \$16,000.

Omaha, Neb.—Architect A. M. Rouse, of Des Moines, Ia., reports: For L. J. Drake, fifteen-room frame residence, hardwood finish, furnace heating, electric bells, etc.; cost \$9,000; plans under way.

Owatoma, Minn.—A syndicate has been formed to donate a building site, 66 by 132 feet, on which to erect a large brick hotel, and a prominent builder has agreed to build in the spring. At the same time it is expected that a G. A. R. memorial hall will be built.

Pensacola, Fla.—Business very dull, with no prospect of an early improvement.

Architect W. W. Myers reports: For W. L. Creigler, two-story frame residence, 63 by 85 feet, slate roof and sanitary plumbing; cost \$6,000; under way; James Coleman, builder.

Pittsburgh, Pa.—John U. Barr is the architect for the new eight-story brick and stone office building on Tenth street, to be known as the "Irish Block."

Portland, Ore.—Architect C. F. Ringer, of Milwaukee, Wis., reports: For Mr. Frank, frame residence; to cost \$7,000; plans made.

Quincy, Ill.—The Gem City Mills were entirely destroyed by fire April 6; total loss \$200,000. The buildings were owned by a stock company of Quincy men, and cost \$125,000. Insurance on buildings, \$30,000.

Richmond, Ind.—Condition improving.

Architect John A. Hasecoster reports: For City of Richmond, stone front city hall, 95 by 70 feet, slate and tin roof, steam heating; cost \$20,000; projected.

Rochester, Ind.—Architect A. C. Varney, of Detroit, Mich., reports: For Daniel Agnew, two-story dwelling, 33 by 64 feet, brick, stone trimmings, slate and tin roof; cost \$6,000; projected.

Springfield, Ill.—Building is not very brisk at present, but outlook is favorable.

Architect Geo. H. Helmle reports: For Geo. Passfield, three-story brick and stone store building, 47 by 70 feet; cost \$20,000; projected.

St. Cloud, Minn.—Architect L. S. Buffington, of Minneapolis, has prepared plans for machinery and mill implement shops about to be erected. The building will be 300 by 264 feet; cost \$120,000.

St. Louis, Mo.—Architect Geo. H. Edbrooke, of Chicago, has prepared plans for a \$200,000 building to be erected on the southeast corner of Sixth and Olive streets.

Tallahassee, Fla.—Architect W. W. Myers, of Pensacola, reports: For J. S. Winthrop, two-story and attic frame residence, 60 by 85 feet, slate roof, hot air, and plumbing; cost \$10,000; plans in owner's hands.

Van Wert, O.—Architects Wing & Mahurin, of Fort Wayne, Ind., report: For Geo. H. Marsh, three-story brick hotel building, 66 by 132 feet, pressed brick and cut-stone front, tin roof, steam heating; cost \$26,000; contract let; Zook & Wilson, builders.

Ypsilanti, Mich.—Architects E. E. Meyers & Son, of Detroit, Mich., report: For J. Kitchen, frame dwelling; cost \$4,000.

BIDS were opened on the 5th instant, in the office of the Commissioner of Public Buildings and Grounds, for repairing the roof of the White House. The only bids received were those of Merchant & Co., and N. & G. Taylor Co., both of Philadelphia. The former offered "Gilbertson's old method" Martin-Siemens steel extra coated roofing plates at \$6.70 per box for IC 14 x 20 size—guaranteeing 120 pounds as net weight per box. The latter offered first quality "old style" Martin-Siemens steel dipped roofing plates at \$6 per box, of 112 pounds, and "Westminster" roofing plates at \$5.75 per box. As the government advertised for and based its decision "upon weight, ductibility, uniformity of plates, and thickness and quality of coating, as well as upon price," the "Gilbertson's old method" roofing plates have been accepted and ordered for the roof of the Executive Mansion.

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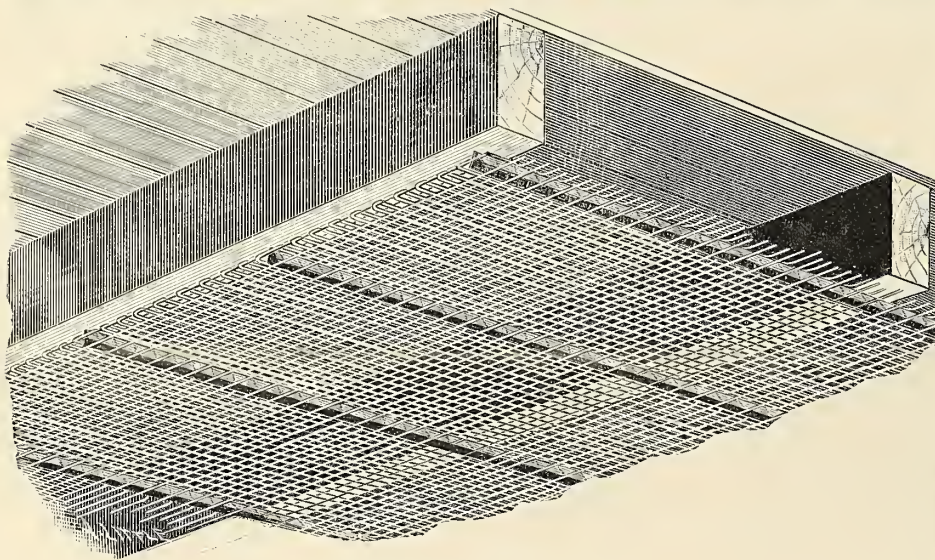
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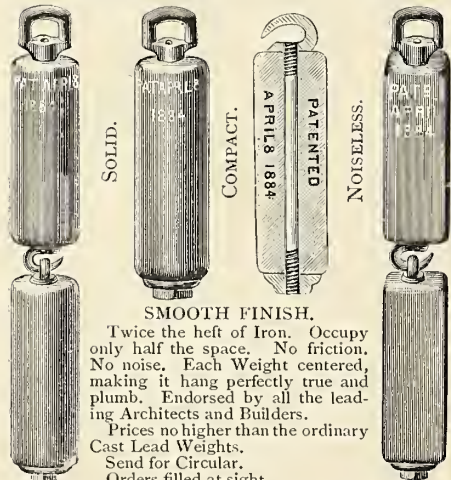
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PROPOSAL.

TO CONTRACTORS.

Sealed proposals will be received until two o'clock P.M., May 12, for the iron floor beams and placing the same in the building, and for the brick and stone masonry of the interior walls and work of the basement story of the central building of the Kansas state house. Separate bids will be received for the iron beams and for the masonry. Plans and specifications may be seen at the office of George Ropes, architect, No. 201 Kansas avenue, Topeka, on and after April 26. Bids must be accompanied by a certified check or a good and sufficient bond in the amount of five per cent of the bid submitted, conditioned that the party submitting the bid will at once enter into a contract for the performance of the work, and give a bond equal to one-half the contract amount, with good and sufficient securities for the full and faithful performance of the contract. Bids to be addressed to George Ropes, architect, endorsed, Proposal for State House Work.

The board of state house commissioners reserves the right to reject any or all proposals.

Per order of the Board,
GEORGE ROPES, Architect.

Topeka, April 15, 1886.



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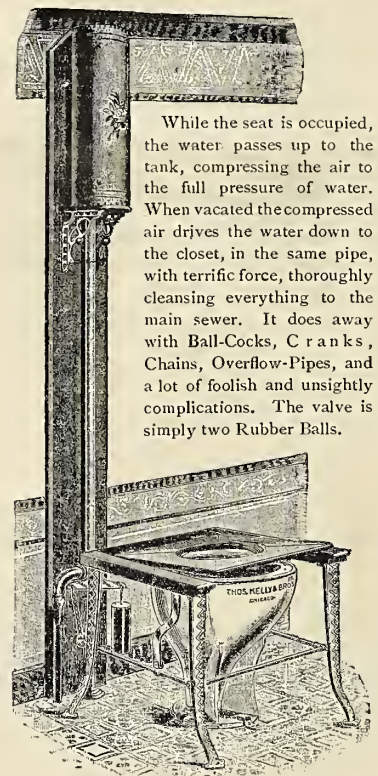


FIG. 3.

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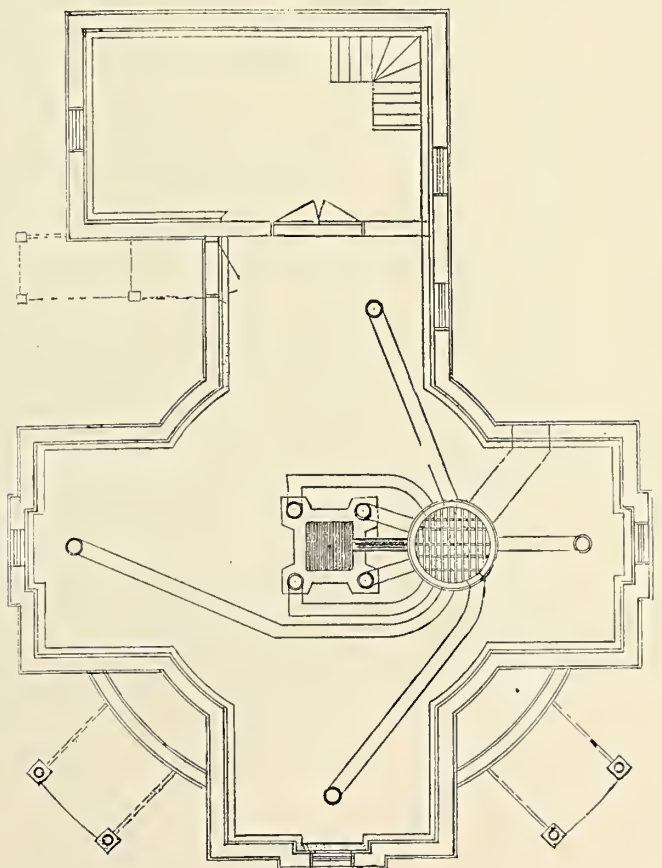
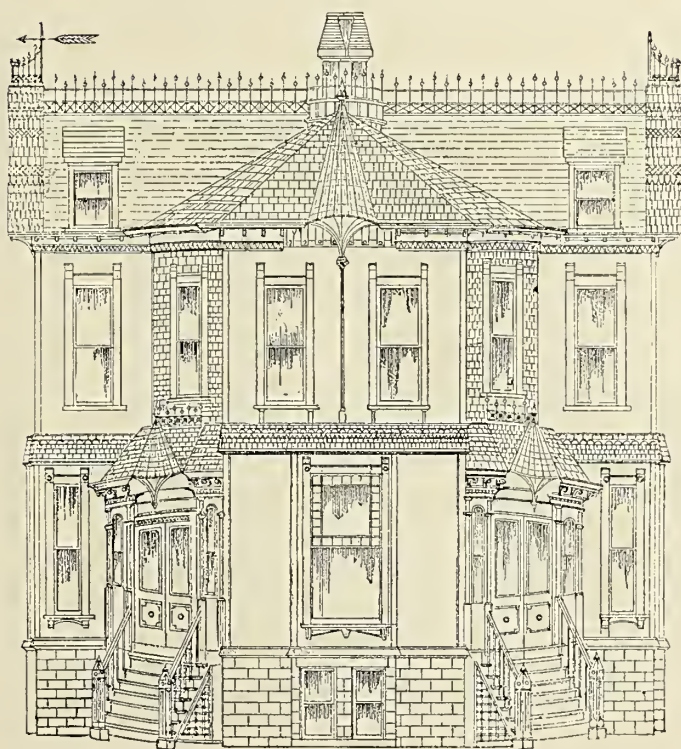
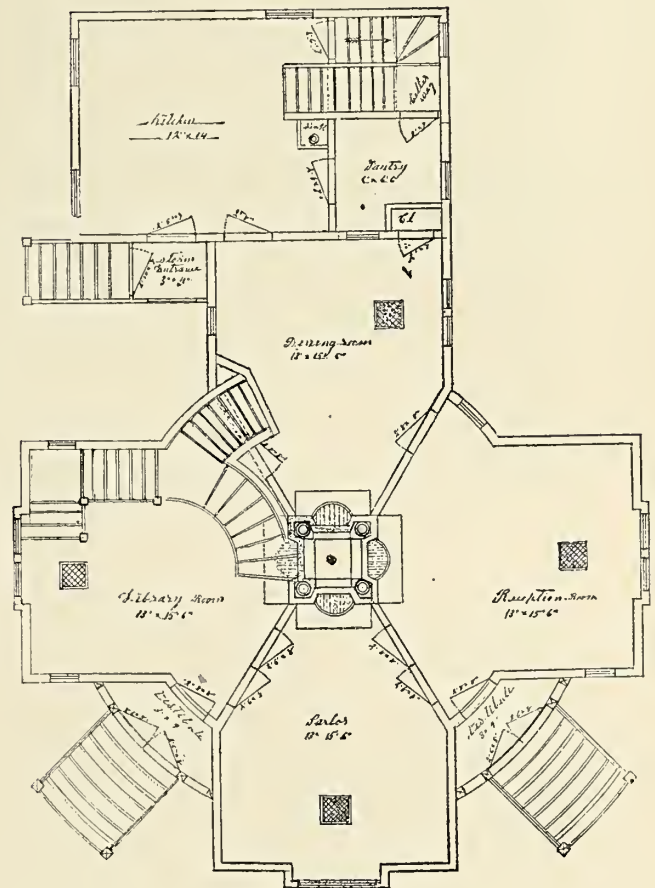
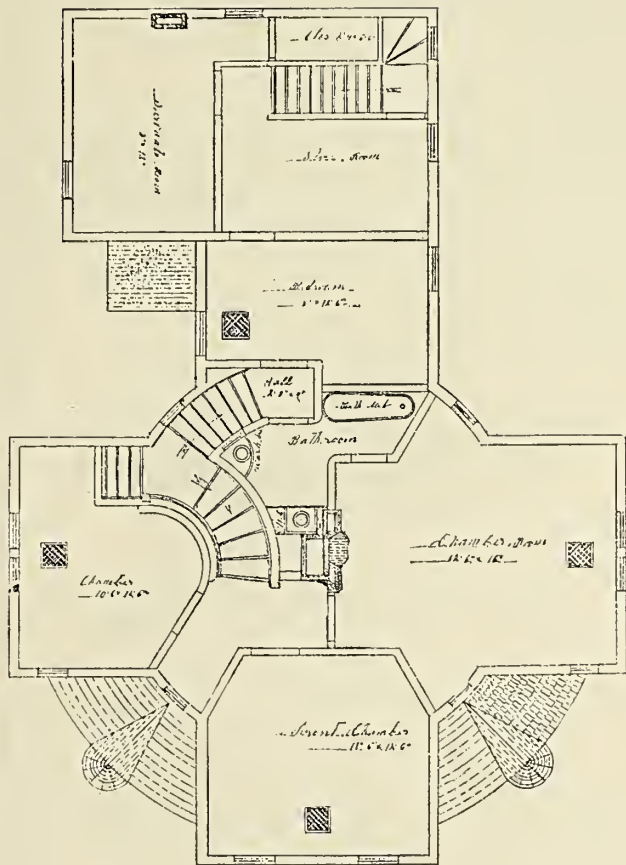
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There is no other rolled Roofing Plate to which the above specific guarantees can truthfully be applied, and we unhesitatingly affirm it to be the best plate of its class (patent rolled) now in the market.

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ARCHITECT Henry Hobson Richardson, of Boston, died at his home at Brookline, one of the most beautiful suburbs of that city, on the 27th of April. Recognized by the profession as the foremost architect in this country and celebrated abroad, his death calls forth expressions of the profoundest regret, his loss being the greatest and most irreparable the profession has met with in the New World. His age was about forty-seven years, and he was in the zenith of his fame, some of his greatest works being still incomplete, when his great vitality succumbed to the complication of diseases that had for years marked him for an early death. No other architect has done so much toward the development of a style as Mr. Richardson, his work bearing the boldness of the Romanesque and the oriental lightness of the Byzantine, but going, some of his admirers think, far beyond the best examples of either, and giving, with a purity and strength that is inimitable, creations such as shall in the long future mark him as a great teacher if not a true master in his profession, as his works are compared with the best the architects of the nation may develop. He did not live long enough to be deemed a prophet, and he lived too long to be less than a great teacher to those who come after. He never was a writer, but his thoughts, his best feelings, his hopes, and his ambition, are written in enduring stone. It may be because he selected that style of itself most adaptable to our needs, or it may have been the genius of the man that has done so much toward forming a basis for an American architecture, but it is not too bold a thought or an inconsiderate judgment that leads us to predict that, as the years go by, and though others as great as he, and even more versatile and popular, may come, Mr. Richardson will live, and in the estimation of the profession stand, as the Angelo of his time.

SOME of the foreign journals are deriving some hope and consolation from the extensive strikes that are now taking place in this country, and the serious interference with American mechanical production that is likely to arise from the hostile attitude of American workmen. One journal says, in view of the socialistic and eight-hour demonstration which is taking place: "It is not unlikely that European manufacturers in a very short time will be relieved from all danger of successful competition from the American continent." The ground for this hopeful anticipation of relief from "all danger of successful competition from the American continent," is found in the recent strikes in Eastern cotton-mill centers, and in other large manufacturing points both East and West, and the general hostile attitude of the workingmen, as evinced in the demonstrations of the socialists and the clamor for ten hours' pay for eight hours' work. Workingmen should remember that their acts and declarations are not confined to the special locality in which they are made. Telegraphs, railways and steamships not only carry them to all parts of this country, but across the ocean to the British Isles and the Continent of Europe. And everywhere stand men waiting to take advantage of every opportunity furnished by the unnatural contest of labor and capital in any portion of this country. Should the programme of the socialists and the eight-hour leaguers by forcible measures be carried out, foreign manufacturers believe they might easily step in and take possession of our own markets, as well as retake the foreign markets that our manufacturers have partially secured. But even if we only lose the hold we have so

laboriously secured in the foreign markets, through the demand of factious workmen for ten hours' pay for eight hours' work, large numbers of operatives in the mechanical and architectural industries will have to seek other lines of employment. Our manufacturing capacity for production is already far in advance of the demand for home consumption; and if we must abandon all other markets, we must very largely curtail our production. This can have but one effect: to decrease the demand for labor; and, so long as the supply remains the same, the price must fall. Thus our workmen, while ostensibly punishing their employers, are in fact working against their own interests, and giving aid to the manufacturers, proprietors and employes of the Old World, without in the least benefiting themselves.

THE Kansas City Exchange building, competition for which several architects have been requested to submit designs, is one the plan of which can be presented as a model, and if carried out in the spirit of the instructions will form a basis for all legitimate competition in the future. The instructions sent out were formulated by the competition committee of the Western Association, in conjunction with Mr. W. R. Ware, Professor of Architecture in the Columbia College School of Mines, New York, who is retained by the building association as their advisor. Architects Peabody & Stearns, of Boston, Burnham & Root, of Chicago, and Geo. B. Post, of New York, have been selected to compete, and will be paid \$500 each for drawings presented. Other architects are at liberty to send in designs, and these will receive consideration, all drawings being immediately returned if not accepted. The cost of the building is limited to \$400,000. The drawings are to be one-sixteenth scale, consist of plans, section, elevations and perspective, and must reach the committee by June 15.

MOVEMENT that finds its parallel in the bill now before congress governing the public architecture of the country, is that of the council of engineering societies, in their endeavor to form a board of public works, who for that purpose will memorialize congress. It is certainly time that such a change in the administration of national engineering affairs was made, as the river and harbor and other improvements are too extensive to allow the present method to be continued. The most popular plan, and one which we think eminently proper, is to place the entire field in the hands of a competent board, probably under the treasury department, whose province it would be to select from the engineers of the country, from civil life or from the army or navy, those especially fitted by education and experience to perform the work demanded. The bill under consideration covers this, and it should be promptly brought before congress and receive the support of every public spirited citizen.

"BRICKWORK," is the title of an exhaustive paper upon the subject, by George Beaumont, architect, read before the Chicago Architectural Sketch Club, and printed with illustrations in this number. Mr. Beaumont has gone into the subject with a thoroughness which is most commendable, considering the limited time for research that belongs to an architect, and that his associates will in a large measure gain by his work. The paper not only gives practical examples of good and bad bricks, proper and improper bricklaying, but treats of designing for brick construction. Mr. Beaumont has also gathered statistics regarding the eight hour movement among the bricklayers. On the whole, the paper is most valuable, both to architects and contractors.

CINCINNATI architects have found that, in justice to each other and the public, a stand should be taken against contracting architects. It was found that the rules debarring such from association membership were not sufficient, and at a recent special meeting of the Cincinnati members of the Association of Ohio Architects, the following resolution was passed and signed, the notice of meeting furnished by the secretary of the association being as follows:

The following resolution was passed by the undersigned Cincinnati architects at a meeting held at the Builders' Exchange, Monday, April 5, 1886:

Resolved, That hereafter all builders making a practice of making or furnishing drawings to parties contemplating building will be debarred from the privileges of making estimates in our offices.

Geo. W. Rapp, Smith & Forbush, Rumbaugh & Schureman, Gustave W. Drach, Theodore A. Richter, Jr., Plympton & Trowbridge, Emil G. Rueckert, Edwin Budde-meyer, Des Jardin & Hayward, Jas. W. McLaughlin, Edwin Anderson, Wm. Martin Aiken, Samuel Hannaford, W. W. Franklin, H. E. Siter, Chas. Crapsy.

Builders who have been furnishing drawings, and who desire to retain their privileges in the above offices, will please notify the secretary at once, in writing, of their discontinuance of the practice, and have their names removed from the black list.

OLIVER C. SMITH, Secretary.

The course taken by architects generally in discountenancing all manner of contracting by architects is most acceptable, not only to the profession, but to those who have in the past done an extensive business as contractors, and furnished their own plans. The principle has been established that an architect cannot be a contractor, and that it does not pay the contractor to make his own plans, and the action of the Cincinnati architects will be endorsed by all but those who are not representative men among either architects or builders.

ANOTHER subject of equal importance came before this meeting. The county commissioners, with the too universal ignorance of architectural rules displayed by public officers, wishing to secure an architect's services in erecting a wing to the Longview asylum for the insane, advertised for bids from architects. The members present who signed the resolutions given above then proceeded to form a city association, under the rules of the Association of Ohio Architects, called the Cincinnati Chapter A. O. A. They elected, as officers, Geo. W. Rapp, president; Walter R. Forbush, vice-president; Theo. A. Richter, secretary; Edwin Buddenheimer, treasurer. The association then agreed to send a communication to the commissioners, objecting to their method, sending them the schedule of the Western Association, with the statement that these were their terms for professional services. This communication was signed by the architects present. When the bids were opened, four who had signed, and one who had not, had bid. The lowest was for less than one-half of one per cent, and all were less than the schedule.

WE are frequently called upon to criticise the action of architects who are not within the association, but when men who call themselves members of this, the grandest of the professions, make specific agreements and then deliberately break them, to say that they deserve to be cut off from all professional fellowship is treating the matter with exceeding mildness. The rules of architectural associations are advisory only, and no pledges are made, but the tacit understanding that those rules are good and should be observed, that the credit and dignity of the profession may be upheld should keep men from violating them. A special agreement, such as the one under consideration, is governed by the universal rule of honor. We hope the gentlemen involved will be able to make a suitable explanation at the next meeting of the association, but their action should not be allowed, in any way, to interfere with the future of the chapter, especially at the outset of so valuable an organization as that they have just formed, and owe to themselves and the public to perpetuate.

H. H. Richardson.

BY P. B. WIGHT.

ONE night last week, between the acts of one of the most brilliant comedies of modern times, a great merchant accosted me with the words "Richardson is dead, I have just received a telegram from his office." The drama of real life, the incidents, the struggles, the ultimate success of one of the world's greatest workers, and the untimely death of a friend, cut off at the very zenith and fruition of his career, recalled memories that usurped for the night all the mimic scenes that transcendent genius could depict. The life of Richardson was too real to be called dramatic. And yet it abounded with picturesque and, to some extent, romantic situations. But it was above all the life of one devoted wholly, absolutely and solely to his art. He was a man who took time for nothing else; he never took up the pen and never undertook any ventures outside of it. For the last thirteen years it was part and parcel of his daily life. Having an affectionate and domestic disposition, he never allowed his art to cause him to neglect his household, and so he took all his office work to his home and made it the share of his home life. He was always an indefatigable worker, and the more he worked the better he was for it. It was never wearisome. On the contrary, it kept down his bodily ailments. Without work he never would have lived so long. He died in the fullness of his mental and artistic strength at the age when men do their best work, and he worked until nature called him. For many years past he has been aware that he might die suddenly. He always talked of it as one of the natural events, the last event of life, which had no terrors for him.

Richardson was born in New Orleans. I cannot give the year, but think it must have been 1839 or 1840. He was from one of the oldest English speaking families of Louisiana, and there were very few of them. His mother was daughter to the Rev. Dr. Priestly, a Unitarian minister, and from that source he doubtless imbibed his very liberal ideas on the subject of religion, which increased with years. He entered Harvard University in 1855 and graduated in 1859, in the same class with Dr. Phillips Brooks of Boston, whose church he designed and erected many years later, it being the work with which his name is most popularly connected. He went to Paris immediately after graduation, having left the fine library which he had accumulated, when a student, stored in Boston. I speak of this because it became subsequently an important factor in his career. At Paris, he immediately entered the Ecole des Beaux Arts, and the office of Labruste, architect for the extensions of the Louvre, as a student. While there he was the ideal student of the Quartier Latin, and speaking the French language with fluency, became identified with all that was arduous, romantic and jovial in the life of the French art student.

On the completion of his course at the *École* he concluded to return to America and took passage on a Cunard steamer, which landed at Boston. But meanwhile our country had become embroiled in a civil war of greater magnitude than had ever existed before, and the extent which a young American who had lived a student life in Paris for several years, whether he might be a Northerner or Southerner, could hardly be expected to realize. Young Richardson had no idea of the extent of the trouble, absorbed as he was in his studies. Without any connections inclining him to the side of the North or of the South (except so far as his relationship on his father's side was concerned), he only thought that America was his country, and that it was time to return. His intentions really were to settle in New York or Boston, and he never dreamed that the fact of his birthplace being Louisiana would put him in the position of an alien enemy, should he reside in the North. Had he been like many other Southern non-combatants he would have remained abroad where he had opportunities and acquaintance. It has been so often erroneously said that he was obliged to return to France on the same ship because he refused to take the oath of allegiance, that I am particular in this matter. He did land in Boston, and then only realized the state of affairs in this country. He was sheltered in the houses of his friends, all of them the most patriotic Union people, who realized his position. He could have gone through the lines to the South, but knew that he could never make a living then at his profession, for he was then without resources, and had no idea of taking up arms. He wanted to remain in the North, but saw that he would be treated as a suspect on account of his birth; that this very circumstance would stand in the way of professional success, and that he would only expose his friends to danger by accepting their hospitality. So he concluded to return to France; and as the steamer he had arrived on was the next to sail, he went back on it. This is the story I had from his own lips, which I repeat without giving unnecessary details.

On his return, he re-entered the office in which he had been a student, and rose by gradual promotion until he became *chef d'atelier*. He is the only American who ever filled that position in the office of a French architect.

After the close of the war, he returned again to America, but this time came to New York. There he was made welcome at the office of Emlen T. Littell in the Trinity Building, and it was then that I first had the pleasure of making his acquaintance.

It was about a year ago, when we met in a hotel at Pittsburgh, that he told me the story of his life, and it was with some surprise I then learned that I was the first architect to call on him. He said that he then realized what it was for a professional man to emigrate to a new country, where he literally had no friends until after his arrival, for he had resided abroad seven years, and almost felt as if he had no country. He only knew this as the land of his birth and early education. Many years after this time my acquaintance with him was renewed, and I was associated with him professionally for a short time.

It is known to but very few that, after coming to New York and taking a small office adjoining that of Mr. Littell, Mr. Richardson, notwithstanding his cheerful and whole-souled disposition which dispelled all thought of it, was suffering the pangs of poverty, want and disappointment. Friends he gained, and many, but they were professional friends who were attracted and entertained by the peculiar charm which made strong friends of all with whom he was brought in contact. But of clients, with building projects and money bags, there were none. One day, when his means were nearly exhausted, he thought of his library which had been carefully selected during college days when he did not lack resources. He remembered having stored the books in Boston, years ago, and had no idea whether they were to be found or had been sold for storage. He had just enough money to go to Boston, and there to his delight he found the cherished companions of youthful days. They were all good books and they sold well. He came back with the proceeds of the sale, prepared for another trial of patience. He lived in Brooklyn, where board was cheaper than in New York, and thus made his funds last as long as possible. But even this supply was nearly exhausted, when he heard that a church was to be built at Springfield, Mass., and that designs would be received in competition. There he went to procure the necessary information and permission to compete; his designs were made, they were adopted, and his first commission was secured.

This church, built of rock-faced stone in a severe lancet Gothic style, as different as possible from that in which he had been schooled at Paris, is a creditable piece of architecture, though very different from those which he has since erected. The employment on the church led to a commission for the railroad office building in the same city. It also is different from any of the Parisian styles. It is of free classic architecture, but built of his favorite rock-face stone, in this instance of granite in huge blocks.

With these two buildings, commenced Mr. Richardson's architectural career. But he felt the necessity of being associated with some architect already versed in the details of American office practice. Charles D. Gambrill and Geo. B. Post having dissolved partnership, the firm of Gambrill & Richardson was formed, with offices at 59 Broadway, New York. This partnership continued until the untimely death of Mr. Gambrill in his New York office. The practice of the firm gradually increased. The Springfield work led to other work in Massachusetts and even in Boston. Mr. Richardson took to himself for wife a daughter of New England, and concluded to live in Brookline, Mass., one of the most picturesque suburbs of Boston, where he was surrounded by the friends of his wife and the refined and cultured society whose association and sympathy he craved. At first this residence, so far from the home office, was simply a convenience in attending to the eastern business. But he soon found that he could do his best work in the quiet and retirement of his own home. It was there that he was inspired to conceive the great works with which his name is associated. The New York practice was never extensive or lucrative, and on the death of Mr. Gambrill the office was closed and removed to Mr. Richardson's house at Brookline. It was large and old fashioned, but not possessed of those features which make the old colonial houses objects of interest and study to the architects of the present day. In fact, it was not a colonial house but one of the early part of the present century. Its size and location were all that commended it to the occupant, who was not owner but tenant. It occupies a commanding hill so surrounded with great trees as to command but scanty views. Mr. Richardson commenced building temporary additions to accommodate his largely increasing office force, which not only consisted of hired draughtsmen but a large corps of students. His library was, at first, in his house, and all his employes had the freedom of the house, for house and office were one. The additions grew out like spurs, as the ground afforded level places to build. Exteriorly they resembled barracks or hospitals, interiorly they were the most interesting of studios. Each employe had his own alcove, and Mr. Richardson's portfolios were at the free disposal of all to decorate their alcoves as they pleased. So each alcove was the expression of the taste and aspirations of the occupant.

Two years ago, realizing the great danger from fire to his immense

collection of books, photographs and the numberless objects of art which filled the studios and house (for the accumulation was very rapid), Mr. Richardson built a large fireproof library at the extreme end of the line of studios and as far as possible from the house. Everything about it is on the largest possible scale, in keeping with the large physique, not less than the large minded generosity of the owner.

Once only has Mr. Richardson visited Europe since his residence there, and never, to my knowledge, has he visited the South, or his native New Orleans. He has always been a sufferer from a complication of chronic maladies, enough to kill any one not gifted with such indomitable will and nerve force. These undoubtedly caused the gradual and subsequently enormous accumulation of adipose matter; for when he returned from Europe after the war he was a medium sized man with no inclination to fatness. During his subsequent visit to Europe, and the scene of his early work, his great size was the occasion of no small amusement to him in confronting his old associates of the *atelier*. But it was the occasion of triumphant reception on the part of many, who, like him, had achieved renown in their own country. From one of the present government architects of France, he failed to elicit a recognition, until he began to repeat some of the old studio slang in French. He returned to America laden down with bric-a-brac, books and photographs to enrich his already large collection, so that his house soon became a veritable museum of art,—the work of but a few years. This afforded the most extraordinary advantage to students, and he had his choice from the most brilliant young men of the whole country, some of whom have already gone forth and achieved reputation in their profession.

Mr. Richardson died from Bright's disease, the worst of all the maladies under whose tyranny he worked and suffered, and yet attended to his professional work to within twenty-four hours of his death. He was expecting daily to leave for Chicago, to see the foundation now being laid for the great wholesale store of Marshall Field, and thence to Cincinnati to receive bids for the New Chamber of Commerce.

Of his works, I cannot in justice speak, for I could name but a small number of them. He has left the stamp of his genius, not only in and around Boston and throughout the New England States, but in many of the larger cities of the West, as well as in the city of Washington. A full list of them should be carefully made and published.

In Chicago his only finished work is the front of the American Express building, erected in 1873, at the time that he was designing Trinity church for Boston. It long stood alone as the most dignified and impressive street front in this city. Two buildings from his designs have just been commenced, the store of Marshall Field, bounded by Adams street, Quincy street, Fifth avenue and Franklin street, and the residence of Franklin McVeigh on the lake shore drive, north division.

His largest work in progress, elsewhere, is the Pittsburgh jail and court house, the former having been just completed. The contracts for the whole exceed two million dollars.

The Brattle street church, at Boston, was one of his earlier efforts, designed while he was still in New York. It is notable as his first attempt to use the round arch style, which he subsequently developed into a modernized Byzantine architecture. The church was never a success. The acoustics were bad. The idea of a carriage entrance through the tower of a church was in bad taste, not to say sacrilegious and smacking of the opera where over-dressed beauties have to be set down under cover. But the tower, otherwise considered, is a noble work of art and, as such, to be considered entirely apart from the church to which it is attached. This building is only of interest as illustrating one link in the development of a definite purpose in all his works of recent years. The Byzantine style has found in him an interpreter worthy of the taste, along side of whose works all others are but travesties of the noble work of the Eastern Empire, which showed the first influence of Christianity over the decorated engineering works of the Romans.

His most highly lauded work, and that which has given him the most extended reputation, is his Trinity church, Boston. When the editors of the *American Architect* asked their subscribers to ballot for the ten best buildings in America, this received the highest number of votes. Mr. Richardson stands, therefore, recognized by his compeers to be the foremost architect in America. I doubt not, however, that the greatest number of votes was elicited by the exterior design of the central tower of this building. Opinions are not divided about that. Those who are informed know that the design for the exterior of the church was mutilated by the building committee against Mr. Richardson's protests, and that he was obliged to leave it in many ways unfinished. I doubt not that the condition in which the church has stood for years, notwithstanding the plaudits of the appreciative multitude, has been one of the few sorrows that have clouded his otherwise cheerful life. Furthermore, the parsimony of the same building committee compelled him to build the four great piers supporting the tower, of unworked blocks of granite, and few there are

who know that, under Mr. Lafarge's exquisite coloring of these beautiful appearing piers, there is nothing but a shell of iron, lath and plaster, surrounding rough blocks of granite just as they came from the quarry. The tower of this church—say what the carpers may, whether it be plagiarized from the towers of Spain or not—is the only part of his work which stands, as he wanted it, and to him alone will the world be grateful for it.

I think, however, that Mr. Richardson's finest artistic sense was displayed in the designs for the numerous libraries with which he has embellished so many of the smaller Massachusetts towns. He was one of the three commissioners appointed to examine and report upon the completion of the New York State Capitol, after there had been some dissatisfaction with the original architect. The commission, consisting of Mr. Richardson, Leopold Eidlitz and Fred. Law Olmsted, reported so thoroughly as to present a complete set of plans for finishing the building in an entirely different style from that in which it had been commenced. The design for the exterior, which was mainly that of Mr. Eidlitz, was not adopted; but Messrs. Richardson and Eidlitz virtually became the architects of the building from that time to the present day, and Richardson made a new design for the exterior, which has been carried out. In the completion of the interior of the north side, containing the assembly chamber, was entrusted to Eidlitz, and the south or senate side to Richardson. This work is still in an incomplete state, and is costing, according to the appropriations, about a million dollars a year. The exterior of the City Hall, in the same city, is a noble specimen of Richardson's best style. The Pittsburgh court house and tower will be, when completed, the grandest of all his works.

As will be seen from what I have said above, Mr. Richardson was schooled and practiced in the French Renaissance of the Second Empire. It was then called the *Néo-Grec*, because it was supposed to be a style whose details were based on the severely graceful lines of early Greek ornamentation. Unlike nearly every other American student of architecture who attended the French *École*, he cut loose from the trammels of the style in which he had been trained, as soon as he felt his own freedom. His first attempts were in what can only be called lancet Gothic. In it he went to the extreme of stiling all his lancet arches and stunting all his shafts. This was tried in several early productions. Then came the cyclopean Renaissance experiment, which was not repeated, and it was followed by the severe Romanesque trial in the Brattle street church, with round arches.

He was evidently impressed with the simplicity and repose of the thirteenth and fourteenth century domestic architecture of France, as revealed to us by many old buildings at Cluny, still standing. In these, the pointed arch and the double segment pointed arch were used in the same wall with heavy straight stone lintels, as the construction and use of buildings happened to call for them. The American Express building, Chicago, is an illustration. Then came Trinity church, which is still Romanesque (by which I mean the northern round arch style), but with a decided feeling for the beauty of Byzantine ornamentation. It was the transitional design in Richardson's career. It fixed his style and made his reputation as an individual designer. Thenceforth the Byzantine style, of which we still have examples in Constantinople and Venice, the style loved, admired and exemplified in the illustrated works of John Ruskin, found in him, not a disciple of Ruskin, but another exponent of its beauties. It was massive and romantic, and those were the essential features of Richardson's artist life.

In his self-education after he returned to his country he was a studious reader of the works of Viollet-le-Duc. And I think that this influence was potent in shaping his artistic career. In France he had been taught to regard the great archeologist as an innovator and interloper, a trampler on the traditions of the French school which had been sacredly guarded since the days of Philibert, De Lorme and Mansart. He had been brought into personal contact with Viollet-le-Duc in a peculiar way, for he was an *élève* of the Ecole des Beaux Arts at the very time that the minister of fine arts appointed Viollet-le-Duc as lecturer on the history and esthetics of art in the *École*. He was a prime mover in the conspiracy to hiss the professor down and drown his voice. In the riot which ensued, he was one of the party that drove the lecturer across the Pont des Arts, and he was one of those who were put in prison for this foolish escapade. He doubtless then knew very little of the teachings of Viollet-le-Duc, but was only impelled by that zeal, which was part of his nature, and put him into perfect accord with his *confrères*. But he made amends to the teacher whose words he refused to hear, by becoming one of the most brilliant exponents of his teachings. The result of the rebellion on the school was of great value to the whole world of art, as well as himself; for, as a result of his voice being stopped, Viollet-le-Duc published his celebrated *Conservation on Architecture*, the most valuable work of the present century on architectural art; and for this the subject of our remarks was to some extent the cause. The later designs of Richardson were all massive, like

himself. He revelled in constructive rudeness. His greatest delight was to go upon the site for some country residence and dig up all the materials on the spot, to erect the house. But no matter how rude or cyclopean it might be it was always graced with the refinement of art in some exquisite detail. He always had the power of an elephant, but he also possessed the delicacy of manipulation of which the elephant's trunk is the greatest exemplar.

In his personal character he was the same. He was strong in argument, mighty in his own convictions, and irresistible in expressing them. Yet he was as a child, with little children. He was a thoroughly domestic man. He loved his home above all other earthly things. It was a home in which hospitality was dispensed generously, lavishly, in which the whole family joined, and the children were not always relegated to the nursery. He delighted to take his children with him on his business trips, which were numerous in later years. These were undertaken as a matter of necessity under great difficulty to himself, for he could never lie down in a sleeping car.

He was generous to extravagance in all his ideas. Entirely indifferent to the value of money, which was only something necessary to his enjoyment and comfort. But he would have had these even without money. The predominating element in his character was the magnetic force of his presence. He could make a friend of his worst enemy in five minutes. Fortunately he combined the genius of a great architect with the ability to convince the world that he was a genius. He knew exactly how to do it without telling people so, and therein was the secret of his success. It was this that made him the most accomplished politician in the profession.

There are other men in this country, I think, of equal ability. They only lack the power to express it so that the world will recognize it. But we will never have another Richardson, and it will be a long time before any other architect will assume equal prominence before the world. His works will be known more and more as time goes on, and their very prominence will make their faults more evident than those of others less known, so that future generations will learn to avoid them. But the good that was in him and his works will not be "buried with his bones," and the coming architect will learn from his life that an absolute devotion to his art and unremitting labor were, after all, the concrete on which his great success was built.

Obituary.

JAMES BATCHEN, the well known cutstone contractor, of Chicago, died on the 15th of April. Mr. Batchen was born in the village of Forres, Morayshire, in the North of Scotland, and received his early education in the town of Elgin. He came to America while still a young man, and pursued his trade, that of a stone-cutter, with all the success due to a faithful and thorough workman. Among the first structures he was engaged on was the superintendence of the stone-cutting work on the National Capitol at Washington. In Chicago he has fulfilled many important private and public contracts, and has done some of the best work in his special line in the rebuilt part of the city. His loss will be especially felt in the stone business, where the value of his knowledge was most marked. He had that talent for judging the proper value and adaptability of stone peculiar to the Scotch, who coming from a granite country, have this faculty above all other nationalities,—the larger proportion of the leading stone dealers and the best workmen, as well as designers, in this country being Scotch. Mr. Batchen's death is a personal loss to a great many people in Chicago, where he enjoyed the friendship and esteem of every one who knew him. He was in all respects an honest, worthy man, true in his friendships, tender as a woman in his domestic relations, and withal a genial, lovable companion—"a couthie, cantie chiel," to quote a favorite song he was wont to sing to his companions. He leaves to mourn him a wife and three children, two sons and one daughter. His son, J. S. F. Batchen, of Chicago, is prominently connected with the stone interest.

ARCHITECT B. S. DE FOREST, an old and well known citizen of Cleveland, Ohio, died very suddenly in his office at that place on the 13th instant.

WE learn with regret of the death of Mrs. Emily Probst, wife of Architect H. Probst, of Kansas City. Mrs. Probst was a lady of exceptional intelligence and education, her knowledge of languages and of architecture having been extensive, and in her social circle she was esteemed by all who were so fortunate as to possess her acquaintance.

AT the last meeting of the Illinois State Association of Architects, the secretary presented a resolution to the effect that, whereas, the members of the association had learned with regret, of the sudden death of Architect Henry Hobson Richardson; and whereas, that architect had occupied a most prominent place in the profession, being the creator of some of the most celebrated structures in the United States, it was the sense of the Illinois State Association of Architects that the members learn of his death with sorrow, and that the secretary be instructed to spread suitable expression of the same upon the records of the association, and that copies of the resolution be sent to the family of Mr. Richardson and to the American Institute of Architects, of which he was a member.

Brickwork.*

BY GEORGE BEAUMONT, ARCHITECT.

WHEN the Executive Committee of this club invited me to read a paper on "Brickwork" I was rather puzzled where to begin, in order to make my paper of some value to you, there being already many excellent publications of an exhaustive character on this subject, so I decided to give my personal experience in the matter, extending over a period of nearly seventeen years.

The essential features of brickwork may be divided into four parts: 1. Bricks. 2. Mortar. 3. Bond. 4. Bricklaying and bricklayers.

I will take them in this order and proceed to describe the qualities of brick, more especially those of local make; they should be made from well tempered slightly sandy clay, free from limestone, slowly and evenly dried, and well burned, they will then give a decided ring when clashed together.

The Chicago common brick is a rough, crooked and fairly durable specimen, those made on the South side contain less lime than those on the North side, and are therefore not so liable to "pop," but the North side bricks are a better shape. These limestone pebbles found in the brick are changed into lime during the process of burning, and when the bricks are put into the wall they absorb the moisture from the mortar, which slacks this now small lump of lime and causes it to burst the face of the brick and disfigure the wall; if the pebble is in the center, the brick is generally destroyed. This "popping" can, to a great extent, be remedied or rather developed by a generous sprinkling with water while the bricks are laid on the ground, and when they are taken on the scaffold the bricklayers can select those slightly damaged ones for the inside of the wall. In hot weather they should be continually watered, to avoid, when put into the wall, the too rapid absorption of moisture from the mortar, which prevents it setting hard. In freezing weather the bricks should be kept very dry, so that the frost will not injure them.

The best common brick in the Chicago market are made by Hayt & Alsip, and when selected for the facing of walls and laid in red, brown, white or yellow mortar, they form a surface rich in warm, soft colors, and as impervious to moisture as it is possible for a common brick wall to be that is not painted. The one drawback to this brick is its smooth bed, which prevents a proper key with the mortar. A specimen of this class of work can be seen in a residence on the corner of Greenwood avenue and Fiftieth street, belonging to Mr. J. C. Welling, and another on Oakwood avenue and Forty-third street, by the same architect, for Mr. J. M. Fiske.

Never hesitate to reject soft, under-burned, bilious looking bricks, when they are delivered at the building, as they cause endless trouble when put into the wall, and the first winter they encounter generally disintegrates them so very badly that the owner silently curses you for the rest of his life, or anyway until he gets rid of the building.

Chicago common brick, when laid in ordinary mortar, will bear about five tons to the square foot, but when the bricks are selected for their good shape and hardness, and well bedded in cement, they will bear about ten tons to the square foot. The weight of a good dry common brick, $2\frac{1}{2}$ by $3\frac{3}{4}$ by 8 inches, averages $4\frac{3}{4}$ pounds; when immersed in water for ten hours it weighs $5\frac{1}{4}$ pounds.

The weight per cubic foot of an ordinary common brick wall, laid in lime mortar, is 115 pounds. If laid in cement, and the bricks selected, the weight is 118 pounds per cubic foot. To lay a thousand bricks in the wall requires one-half a cubic yard of sand and one barrel of lime. A good bricklayer will, on an average, lay about two thousand bricks in ten hours; if the walls are eight inches thick not so many, but if they are twenty-four inches thick even this number will be exceeded. Six bricklayers on a first floor scaffold require the assistance of four hod-carriers to supply them with bricks and mortar.

I believe the Chicago Anderson Pressed Brick Company is the only firm in this city who make pressed bricks. Their products are used very extensively here and throughout the West. In shape they are the truest in the market. They also make a very handsome dark-brown brick, which were used in the residence of Mr. E. Partridge, on Prairie avenue, just north of 29th street. The St. Louis Hydraulic Pressed Brick Company make a very good brick, rich in color, and of a very dense texture; they are in great demand with some architects, and generally seem to give good satisfaction. The Trenton & Tiffany brick are also used here, but my personal experience of them is so very slight that I cannot give you any particulars. The Perth Amboy Company, of New Jersey, make an excellent pressed brick of a rich cream color; a specimen of it can be seen in a residence 2,919 Prairie avenue, belonging to Mr. F. G. Logan. They have also introduced a "speckled" brick, madder brown in color, but pitted with a quantity of tiny steel-blue spots; whether these "speckles" are the result of iron pyrites in the clay, or from some kind of metal filings being introduced, I cannot say, but the effect in the wall is a mass of unique color, full of play, yet strong and dignified. Mr. Tiffany's residence in New York is faced with this brick; also Mr. B. F. Nourse's residence on Grand Boulevard, near Thirty-seventh street.

The output of a kiln contains brick of different sizes, degrees of density, and many shades of color. The dark brick is the best and dearest, because of their being well burnt. Surely the fact of hard-burned bricks commanding the highest price should stimulate our manufacturers to find out a system of burning which would give more equal results than at present; if some better method could be adopted, it would rid the makers of those expensive employes called "sorters," who classify the contents of a kiln according to color. I hope the day will come when architects will cease to specify that all pressed brick shall be of uniform color. This practice has filled our streets with buildings faced with red pressed brick of such even color that it is almost impossible to tell a painted wall from an unpainted one; whereas, if the bricks were taken as they come from the kiln,

* Paper read before the Chicago Architectural Sketch Club, April 12, 1886. Revised by the author, and illustrations drawn expressly for THE INLAND ARCHITECT AND BUILDER.

rejecting of course the "rare" ones, we should have such a play of color in our brick façades that would be much pleasanter than the miserable monotony now seen in most new buildings.

All pressed bricks made from dry, pulverized clay, are more liable to disintegration than those made from well plugged, plastic clay, and the only firm that I know who make brick from wet clay is the Peerless Brick Company of Philadelphia. Strange to say, bricks made from dry clay cannot be sold to any extent in the eastern markets, yet here scarcely anything else is used. Brick made from clay with artificial coloring in it is never so good as the natural color obtained from the oxide of iron in the clay. It takes about thirty days to prepare a kiln of brick ready for the market.

The Peerless Brick Co. say their bricks will not yield to a crushing load less than 400 tons to the square foot. Whether this is correct or not, I do not know, but am quite sure the pressed brick we use here will not bear any such weight. Average size, 2¼ by 4 by 8¾ inches, and weight of a Chicago Anderson pressed brick is 5½ pounds, and will absorb 10 ounces of water.

Average size, 2¾ by 4 by 8½ inches, and weight of a St. Louis hydraulic pressed brick is 5¼ pounds, and will absorb 10 ounces of water.

Average size, 2¾ by 4½ by 8¾ inches, and weight of a Philadelphia peerless pressed brick is 5½ pounds, and will absorb 8 ounces of water.

Average size, 2½ by 4 by 8½ inches, and weight of a Tiffany pressed brick is 5¾ pounds, and will absorb 11 ounces of water.

Average size, 2¾ by 4 by 8¼ inches, and weight of a Trenton pressed brick is 5¼ pounds, and will absorb 8 ounces of water.

Average size, 2½ by 4½ by 8½ inches, and weight of an Indiana pressed brick is 5¾ pounds, and will absorb 12 ounces water.

The various samples were weighed when perfectly dry and again after they had been in water 10 hours and the superfluous moisture wiped off.

These tests show beyond a doubt that you cannot have a dry and healthy house built of brick without it is either painted on the outside or the walls constructed with a cavity; they also prove that a building faced with Chicago common brick laid with close solid joints is practically as waterproof as if it was faced with the best pressed brick.

The following list will give you an idea of the different degrees of shrinkage which takes place in a kiln of Anderson pressed brick.

COLOR.		No. 1. Inches.	No. 3. Inches.	No. 5. Inches.	No. 7. Inches.	No. 9. Inches.
SIZE OF 1 BRICK.	Length	8¾	8⅝	8⅝	8¼	8¼
	Width	4⅞	4⅞	4⅞	4⅞	4
	Height	2⅞	2⅞	2⅞	2¼	2¼

COLOR.		No. 11. Inches.	No. 13. Inches.	No. 15. Inches.	No. 17. Inches.
SIZE OF 1 BRICK.	Length	8½	8½	8	7¾
	Width	4	4	3⅝	3¾
	Height	2¼	2⅔	2⅔	2⅔

In general appearance the American pressed brick is much superior to its European prototype.

After the plastering is done the front should be cleaned down with commercial muriatic acid and water, not too strong, afterwards sponged with raw linseed oil, just what the bricks will absorb on application; this will give good color and make the brick waterproof, preventing to a great extent, if not entirely, the efflorescence appearing on the face. It should be repeated every two or three years, so that the front will always look new, having life and warmth of color. This mode of cleaning is recommended by the Peerless Brick Co., but the Chicago Anderson Co. object to having their bricks cleaned with acid.

In a paper read before the Illinois State Architectural Association at Chicago and published in THE INLAND ARCHITECT, December, 1885, Mr. Anderson says:

In laying up the walls, more or less of the mortar adheres to, and hardens on the face of the pressed brick, which is necessary to be cleaned off, and in doing this a highly objectionable method is universally employed, that is, washing the surface of the walls with a solution of common hydrochloric acid, this contains a large proportion of sulphuric acid which converts the oxide of magnesia in the mortar into the sulphate of magnesia, and appearing on the face disfigures so many of our buildings.

Not being an analytical chemist, I cannot demonstrate to you the actual facts of the matter, but I can say that should an unfinished wall not be thoroughly protected on the top, during a rain storm, it will surely show the efflorescence at the saturated part, as I have often marked these places and proved it when the building was finished, and sometimes before. The introduction of tarred paper between the pressed brick face and the common brick backing, is no use whatever as a preventive. You will very probably have noticed that buildings facing east, are the most liable to this unfortunate "rash."

MORTAR.

I will not attempt to go into the scientific question of the different materials from which lime is made, but will give you the general principles of mortar making: The first thing an ordinary Chicago contractor desires in preparing mortar, is rapidity, or rather cheapness, so he orders his mixer to place in the box a certain amount of lump lime, turns on the hose, and while his eye is cast over the busy groups of men at work on the building, he yells to this bespattered knight, "screen that sand," until sufficient water has run for slacking purposes. Very probably this gentleman is not acquainted with the chemical properties of the material he

battles with, so lets the water run until through with what he is doing, and then suddenly notices that the lime is completely submerged; nothing daunted, he siezes his hoe, stirs up the mixture into a paste very often no thicker than restaurant cream, and dashes into it an unknown quantity of loamy sand, the whole is then attacked by three or four pair of strong arms with shovels, and thrown on the ground ready for the hod-carrier, who comes along and turns it over gently, filling his hod to the utmost capacity, and passes on to the scaffold where rests the mortar-board ready to receive his load. Occasionally one sees a bricklayer who has the moral courage to ask that the mortar be better tempered, but he must be very careful or he is likely to get "fired" for being too conscientious.

What is the result of all this hurry? Ask the owner of a four-year-old building, who has just paid a considerable portion of its rental for labor and material in raking out the crumbling mortar joints and refilling them with a similar kind of mortar; if he does not know, permit me to enlighten him; it is because the mortar was made as I have just described, and if used in winter, the defect is only aggravated.

It is easy to tell when lime is good by seeing it sputter and emit large quantities of steam during slacking, it should also fall to pieces very quickly, leaving no hard lumps or coarse particles. This method of reducing the lime directly to paste, is generally adopted in this country. From time immemorial the usual practice in Europe has been to first slack the lime with the smallest possible quantity of water, covering the mass with clean sand to keep in the heat, until it falls to fine powder, then pass it through a one-fourth inch wire screen to clean it of core—if there is much of this refuse it indicates that the material from which the lime was made was either not suitable or not burned sufficiently. This, for certain kinds of lime, is the safest way to ensure a thorough slacking, which alone prevents the mortar from blistering and disintegrating. Whichever way the lime is slacked, it must be done carefully and thoroughly. The best way to reduce lime to powder is to grind it.

Large piers or very thick walls of solid masonry should never be built with mortar made from rich lime, because the mortar in the interior will not set. Instances of this kind I have repeatedly seen.

Mr. George R. Burnell, in his treatise on limes, cements and mortars, says:

Some curious facts might be mentioned not only to show the influence of a large body of masonry in retarding the solidification of the mortar in the interior, but also of the danger of using rich limes in cases where such masses are necessary. Among them we may mention the fact cited by General Treussart, who had occasion to demolish in 1822, one of the bastions erected by Baubien, in the citadel of Strasbourg in the year 1666. In the interior, the lime after these 156 years, was found to be as soft as though it were the first day on which it had been made. Dr. John mentions that in demolishing a pillar nine feet in diameter in the church of St. Peter, at Berlin, which had been erected eighty years, the mortar was found to be perfectly soft in the interior. In both cases the lime used had been prepared from pure limestone.

The sand must be clean, sharp and not too fine, if it is loamy it will kill the best lime in existence, and allow of great settlement in the walls. Some kinds of sand are reduced to powder by the manipulation of mortar mixing. Three parts sand to one of lime is an average proportion. Never make the mistake of insisting that a large quantity of lime shall be used, as the best kind of mortar is made from clean, sharp sand, with just sufficient lime to bind the particles together. The reason I lay so much stress on clean sand is because of its well known incompressible qualities; to prove this get two bricks and bed them together with lime paste only and you will be able to squeeze it all out, then bed them together with lime and sand and notice the difference. Walls built with ordinary lime mortar should proceed slowly, to give the mortar time to crystallize, they will then be more durable and less liable to fracture. The vile and filthy practice of covering mortar beds and foundations in winter with manure, should not be countenanced in good building operations, and if the mason cannot find any better way to prevent his mortar freezing, he should quit until spring time rather than turn the building into a cesspool.

BOND.

In Chicago, this important part of brickwork is reduced to a minimum, and even then despised and trod upon by the bricklayers when working at a certain height above the scaffold.

The present system of bonding is done for convenience and cheapness; if it were repeated oftener the men could not do overhandwork so rapidly, and would have to back up the walls more frequently, thus preventing their standing on the inside face instead of on the scaffold, which is the proper place. On first coming to this city, I was amazed to see thick walls carried up with headers at every sixth course. Nothing less than a row of headers every third course should be allowed, and in first-class work an alternate course of headers and stretchers only. This latter mode is called English bond, and is the strongest that can be used; being the most expensive it is, therefore, seldom adopted. When any racking back is necessary in consequence of waiting for cutstone or pressed brick fronts, it should be done according to Fig. 1 on the diagram, and not as shown by Fig. 2. (See illustration pages.)

This pernicious practice of leaving down the fronts is often the direct cause of disastrous settlements and unsightly fissures in the walls, the foundations are over balanced by one part being carried up before another, causing the bond to be fractured, though not always visible at the time. Hoop iron is often introduced into the return walls and left hanging out until the fronts are brought to a level, when it is walled in and continued over the window and door openings. Scantlings should never be used for bonding brickwork, because of the shrinkage. Great care should be taken to preserve the bond where the internal walls are connected; very often this done in the most reckless manner. See Fig. 3.

Brick piers should be properly bonded throughout every course, and on no account allow the outside face to be taken up ahead of the interior. Nor is it necessary to introduce bondstones, as they tend to destroy the homogeneity of the mass, and on the slightest lateral movement the piers have an inclination to slide form their bed at this part. The diagram will show you bond for walls of different thicknesses.

Many architects think that a facing of pressed brick looks better without headers, but why should we object to seeing the very thing which

really strengthens the wall? This showing of construction is one of the first principles of true architectural design, and should be encouraged rather than the system now in vogue, that of bonding the pressed brick face with clipped headers or iron binders. I always feel guilty of abetting bad construction when seeing pressed brick facing attached to common brick in this way.

I wonder if Mr. Anderson ever thought how naively he was exposing the ignorance of architects and builders when suggesting that his patent binders would allow the inside face of a wall to settle without disturbing its artificial complexion, shall I say, for facing common brick walls with a thin slice of different material, makes it assume a virtue it does not possess, that of being a compact wall whose interior is thoroughly well tied to the exterior?

BRICKLAYING AND BRICKLAYERS.

Whenever I pass a building that exhibits a bad display of brick walling, I always feel sure that the mason contractor is either a very inferior mechanic or else a mugwump. This is the kind of man that slights the bond, makes poor mortar, leaves the joints unfilled, and drives his men more like horses than human beings, and although the whip is not actually applied to their backs, it is to their senses, it cuts deeper and stays longer especially when it is weighed with oaths of the vilest kind. No wonder the men snap and snarl, look gloomy and absent minded, strike for higher wages and less hours, when the only pleasure they seem to have is in drawing their pay, they certainly have none in the discharge of their daily labor, for it is one continual rush from morning to night, with no thought of how well the work can be done, but how many bricks can you pile on the wall, one can scarcely say *in*, because they are so carelessly placed there.

How different is this to the way they do brickwork in Persia, where, according to Mr. S. G. Benjamin's report in the *Century* for last December, when a Persian bricklayer wants another brick he shouts down to the fellow who corresponds to our hodcarrier: "Brother, in the name of God toss me a brick." The one below then picks up a brick, shouts: "O my brother, in the name of God, behold a brick," and shies it up at him. How it would astonish a Persian bricklayer (says the *Daily News*) to get a job in this country where the one word "mort," mixed with a blue streak of profanity, fetches a wheelbarrow load of stuff up the ladder. But our system has at least the one advantage—that the same generation usually begins and completes a building.

A journeyman bricklayer seldom uses his own judgment when at work, beyond gauging the quality of his labor by the standing of his employer. The moment he steps on the scaffold he knows whether good, bad or indifferent work is expected of him. Should he dare, under the watchful eye of some contractors, to lay bricks solid and true in the wall, he would be instantly discharged as a slow, expensive workman; should he in another case lay bricks in the generally accepted manner, he would again be discharged, this time because he was a poor workman. The result is, a great many of our mechanics learn only the worst kind of brickwork and such a thing as a brick groined vault is unknown to them, even by name. Therefore how necessary it is that they should serve an apprenticeship or go through a manual training school creditably, where every kind of brickwork could be taught.

I understand the trade school in New York has actually been boycotted by the masons. Surely those men cannot be American born, they must be immigrants of the worst dog in the manger type, who come here and enjoy privileges undreamed of in the old world, and in return actually try and prevent the rising generation of our boys from learning a useful and necessary trade, so they may always have employment, not by reason of their merits but by controlling the supply of skilled mechanics.

To a great extent, the general public is responsible for cheap and rickety buildings, the cry being, for how small a sum can you do this brickwork, as a consequence, the quality of the labor is lowered to the standard of public demands, and in order to squeeze any profit out of his contract price, the mason must give a large quantity of a poor quality.

Another potent factor allied against the execution of good brickwork, is trades unionism as at present conducted, for it is contrary to human nature to expect an ordinary mechanic to make an effort to improve his handicraft, when a high rate of wages is fixed for him, irrespective of his qualifications, and I say without fear of reliable contradiction, that the abilities of a majority of our bricklayers have been deteriorating this last five years and it is only by the incoming of eastern mechanics to assist the old hands that the excellent brickwork I am about to speak of has been possible.

Now let me direct your attention to some first-class brickwork that was done in the substructures of such buildings as the Traders, Home Insurance, Rialto, Phoenix, Studebaker, Central and the J. A. McLennan block of flats, on the northwest corner of South Park avenue and Thirty-first street, this latter, for a building of its kind, is unusually good from foundation to roof. These magnificent specimens of enduring brickwork are a credit to the architects who so carefully calculated the dimensions and dispositions of the piers and walls to receive the superstructures, and also great praise is due to the contractors and their employés in so faithfully carrying out the ideas of the designers. During the erection of these buildings, my duties often took me past the sites, and I never could refrain from lingering a few moments to watch the men lay brick, with that peculiar dexterity noticeable in first-class mechanics, and would turn away with a feeling of admiration, only to find when I got to the next block, some bricklayers at work on the iniquitous practice of bringing up the outside face of the wall five courses ahead of the interior, without any bond. This at once cooled my enthusiasm and warned me that I was still in Chicago.

In San Francisco the walls are built with solid joints; this they are compelled to do, because of the frequent occurrence of earthquakes. How we should quake here if we were subject to such convulsions of nature, when we think what a hollow mockery most of our walls are. It is just as necessary to do such work here, because of the ever moving nature of our ground, and the constant concussion buildings are subject to from heavy traffic in the streets, especially those that are paved with granite or any such unyielding material.

In the building where my office is located there is a very preceptible and annoying shudder goes through the structure every time a heavily loaded wagon passes by. The only way to get a solid wall is to use what the workmen call a "shove" joint, which requires the mortar to be unusually well tempered so the brick will slide easily up to its fellow, taking along mortar enough to overflow the joints, but this entails considerable more labor on the part of both bricklayer and mortar mixer, which restricts its use to the very best class of work.

If a firm like Messrs. Burnham & Root would allow the younger members of the profession to occasionally visit their buildings, and let them actually see first-class brickwork as exhibited in some of their foundation walls, it would do more toward improving their knowledge and indirectly the quality of brickwork than all the books they could read in a lifetime. Never carry the brickwork below grade if you can avoid it, because the bricks will not stand the alternate change of dampness and dryness in the soil, and moreover they are always absorbing whatever moisture there is in the ground, causing them to disintegrate very rapidly. If you cannot procure rubblestone for your walls up to grade, then cover them with a coat of English Portland cement.

The absorption of moisture by the basement walls is a primary cause of premature decay in the general construction of a house; it helps to write off every year at least five per cent of the original value of the building, and to make the occupant wonder what is the matter with himself, when he gets out of bed in a morning feeling dull and stupid, especially in winter when the windows and doors are almost hermetically sealed with weatherstrips and every other known device for keeping out fresh air at a temperature of 25 degrees below zero. It never strikes him, that to a great extent it is the ground moisture percolating incessantly through the basement walls, and that this unsavory air comes from the decaying vegetable and animal matter which his servant has thrown into the alley or the next lot, and perhaps for months this has been going on under the eyes of the lady of the house, who probably is the very pink of perfection with regard to her personal cleanliness. What a disgusting sense of shame comes over one on walking down these alleyways of filth, behind even our world-famed Michigan avenue, when we think that with all our boasted civilization, and houses built with every modern convenience, there is not a single architect in this city to my knowledge, who provides in a sanitary manner for the proper disposal of this refuse from our households.

If architects will not do this, why in the name of common decency do not our educated citizens cry out for a stove to burn this refuse, and thus destroy its deadly power at once, surely some one in this city can make a small crematory out of a metal pot, with a moveable cover and a piece of stovepipe which could be connected with a flue carried above the roof, and heated with a single gas jet, into this could go all dead rats, bones, scraps of meat, potato parings, and even that miserable brown wrapping-paper that the meat is rolled in by the butcher, and which has been made from rags picked out of the gutters, or perhaps taken from the back of some dead cholera patient. But I am digressing from my subject; in order to prevent this absorption of moisture, the foundation walls could be faced with common salt-glazed brick, laid in English Portland cement. What I mean by a salt-glazed brick, is a good, sound, common brick burnt in the same manner as a drain pipe, vitrified, in fact, and thus made impervious to moisture; these, if carefully bedded, would make the foundation walls absolutely waterproof, and would go a long way toward making our homes pleasant to live in, and also improve our general health; by this means we could also do away with the present and often treacherous rubblestone foundation walls, and build them entirely of common brick, thus making a much better looking wall, quite as strong for ordinary purposes, and would save 12 inches of space in the length and breadth of every basement that is now built with rubble.

Another mode of keeping out the moisture, is to build the walls with a 2-inch cavity, between the outside and inside faces, this will keep out the dampness, making the building warmer in winter and cooler in summer, vermin cannot secrete themselves behind the furring, which is not required. No chance for fire to spread up the walls and no cracking of plaster. The cost of furring strips, laths and one coat of plaster is saved which nearly offsets the extra cost of cavity. Mr. D. Harry Hammer's residence, on the northwest corner of Grand Boulevard and Thirty-seventh street, is built in this way. This is the only building I am acquainted with in Chicago where the walls are so constructed, and I am quite sure Mr. Hammer will never regret having done so. After a heavy shower the bricks retain the water and pass it through the walls by capillary attraction, but if your walls have a cavity you can afford to ignore such a calamitous reality.

A damp-proof course is also a good protection against moisture. This necessary operation is invariably omitted in this city, to the great detriment of good work; it prevents the spread of dampness up the interior of the walls and can be done at little expense. It should be put on the top of the foundations as well as at the grade line.

Hoping to get some expression of opinion with regard to the eight hour movement, on March 11, I wrote the secretary of the Bricklayers Union, asking eight questions and received the following reply on the 9th inst.

George Beaumont, Esq.:

Your favor of March 12, was duly received and referred to a committee with instructions to answer your important questions at their earliest opportunity. But owing to other and previous matters in the hands of the committee, your communication has remained unanswered longer than it otherwise would have been. Also, owing to the limited time we have to devote to the subject at hand, our answer to your questions will of necessity be somewhat abridged, but trust they will suffice for your purpose. Assuring you that the bricklayers are deeply interested in all that the architects may do to advance the art in this city, or inaugurate reforms that will redound to the interests of all concerned.

We remain, yours for the right,

P. J. MINIER,

C. C. SCULLAR,

Committee Bricklayers Union.

The several questions with their answers are as follow:

First Question.—Taking into consideration the practical abolition of the apprenticeship system, from what source do you propose to draw your supply of native skilled mechanics, as work increases and death removes many of the older hands?

Answer.—Instead of abolishing the apprenticeship system, in the year 1882 we adopted the system now in force in this city, and which we find,

together with the emigration from other cities, is ample to supply the demand for bricklayers in this city. In this connection we refer you to page 19 of the enclosed constitution, which reads as follows:

APPRENTICES AND THEIR DUTIES.

SECTION 1. This union shall not allow any one contractor to employ more than two apprentices at the same time, and said apprentices shall remain at the business three years before they can become journeymen, and they shall at all times be under the control of this union, and subject to the wishes of this union during their apprenticeship, the same as a journeyman. They shall come to the hall at least once every four weeks. No one over 18 years of age shall be recognized as an apprentice, except the son of a journeyman who is a member of this union or a deceased member.

SEC. 2. No contractor will be allowed an apprentice until he has been regularly established in business two years. He shall then be allowed one apprentice. When he has been established three years he shall be allowed two apprentices. All apprentices will be compelled to finish their time with the contractor they sign indentures with, except for just cause, or in the case of death of the contractor, or his quitting business.

SEC. 3. All apprentices and contractors shall be required to sign indentures to the effect that the apprentice shall receive his wages weekly or fortnightly, as the case may be, all the year through the same as full time. This is strictly insisted on by this union for the sole purpose of securing for the apprentice a proper and responsible contractor to thoroughly learn his trade. Past experience has taught the union, as well as apprentices, that the aforesaid conditions on the part of the union and apprentices are absolutely necessary.

SEC. 4. Any applicant for time to complete his trade who has served part of his time in this or any other country, shall get regularly indentured papers from some contractor, who has not already the complement of apprentices prescribed by this union, and shall be required to give proof by his work on the wall that he has already served part of his time before he shall be entitled to the protection of this union, and a majority of the men working on the job where he may be employed shall determine how long he shall be required to serve, and shall personally testify before this union their opinion of the time he shall serve, and in case a majority cannot be present they shall delegate one or more of their number to appear before the union in session with their decision in writing. No applicant of this character shall be more than 20 years of age.

SEC. 5. All applicants for apprentice indentures shall be required to present themselves for the same within two weeks after their engagement with contractor.

SEC. 6. No contractor can have more than two apprentices at any one time; he will not be allowed any more until such time that the said two have finished their time, he may then replace them. The walking delegate shall have a list of all apprentices, their names and residence, and the name of the contractor with whom they have signed indentures.

Second Question.—What are your reasons for taking into the union so many men that you know are inferior mechanics, and demanding that they shall receive the same pay as first-class workmen?

Answer.—Previous to 1882 (or to the adoption of the present apprenticeship system) the bosses of this city were manufacturing inferior mechanics by the wholesale, never taking any steps to retain their apprentices a sufficient length of time to complete their trade, and our union was compelled to take their field as we found it, and see to it that every boy was properly indentured to responsible contractors. We also found from the practical appearance of years standing, that whenever there occurred a difference of opinion between first-class workmen and the bosses, the bosses were always ready and willing to employ the most inferior workmen to do, or rather attempt to do, first-class work, and were well satisfied with their services, no matter how well the work was "botched," especially if they secured said inferior workmen for 25 or 50 cents per day less, on occasion of strike or other pending difficulties. Of course we were compelled, under such circumstances, to recognize inferior workmen (if they were not too bad altogether) as eligible to membership in our society, because it naturally follows that if an inferior workman is good enough for the bosses in time of difficulties on account of living wages for superior workmen, then he (the inferior workman) should certainly be good enough to become a member of our organization. We would also add, that we do not demand the same pay for inferior workmen that is paid first-class workmen; on the contrary, we make a standard rate for inferior workmen, knowing full well that superior men are always able to command deservingly higher wages.

Third Question.—What are your ideas with regard to improving the quality of the bricklayers' art in Chicago?

Answer.—The bricklayers do not get time enough to do work right. Some architects in too many cases accept inferior workmanship, when it should be rejected, thereby encouraging bosses to exact from the men more work in a day than they are able to do properly. It is a well known fact that in eastern cities, notably Boston, New York City and others, that the average brickwork is superior in many respects to that of Chicago. We are informed with regard to this point by hundreds of our men, and corroborated by hundreds of bricklayers, who do not permanently reside in this city, that bricklayers in the eastern cities are encouraged in every way to superior workmanship in the art of bricklaying by getting at least sufficient time to lay a brick on its bed properly, to the line and plumb, and with proper bond and regular headers or binders. We think, as a remedy, that it would greatly improve the quality of brickwork if competent and honest inspectors who are skilled in the art of bricklaying were appointed, either by the architect or the city government.

Fourth Question.—Give me your candid motive for putting forth the edict, that henceforth eight hours shall constitute a days work?

Answer.—We believe the reduction of the hours of labor will be productive of extraordinary improvements in our daily life, physically, morally, and financially. 1st. Physically, because we have now on hand too many living evidences of premature decrepitude, caused by the exaction of the tyrannical system now in force, which requires men to strain every possible effort, use as it were, every particle of strength in their bodies, not only every hour, but every minute during the ten hours of employment, to such an extent that our men are continually failing in health of both mind and body, resulting not alone in misery to themselves, but to their wives and children, in being partly and often wholly physically disabled on account of overwork, to provide a decent living for themselves and families. 2d. Morally, because men of our craft will apply at least a part of these two hours time that they are not at labor for the human frame to rest, and the other part to thought and study for the purpose of educating themselves and families for improving their conditions of life in this world, thereby doing their share to make this world a better and happier one to live in. It has been asserted by men of skeptical minds and non-sympathizers of workingmen (would-be moralists), that when workingmen would work less hours per day, they would devote this extra time to the use of alcoholic stimulants, riotous living, etc. We are constrained to emphatically deny the truth of this assertion, to be the final result in this respect to

the reduction of the hours of labor. We are willing to admit, however, that a small percentage of our numbers may use this extra time in that way for a while, just as they are doing under the ten-hour system; but we firmly believe that this percentage will become more rapidly lessened under the eight-hour system than under the present one, by reason of the good example and great influence of the ever increasing majority of their fellow craftsmen. In fact, to put this part of the question in a "nut-shell," we honestly believe the great majority would devote these extra hours to thinking and not to drinking. 3. Financially, because if we improve under the eight-hour system physically, and morally, better than under the ten-hour system, why not financially, when the fruits of our labor from thought and study are used for the advantage of nobler purposes, acquiring homes, and better homes than we had before?

Fifth Question.—Give me whatever grievances you think the men have to contend with in their daily labor?

Answer.—This question is answered in general by the replies to the preceding questions; but it might be added, that continued overwork required by incompetent and unreasonable bosses, who believe, under all conditions, in quantity and not in quality of work, is a grievance the men are almost continually complaining of, and we find the workmen are not alone in this complaint, for very often we see architects and owners have a side to this grievance, in complaining of botch work which is the result of excessive quantity or overwork, to the detriment of workmanship and quality of which is the requirement of architects and owners. Another and very important grievance, is the sub-letting of contracts. This system invariably produces inferior quality of work, because of the double profits required, and in order to make these profits, men are compelled to slight work as much as possible for the purpose of getting the excessive quantity of work required. Then, again, we are aware of the irresponsibility of a sub-contractor in the matter of paying earned wages. The men have no redress under the laws of the state in such cases, consequently we have to be continually on the alert to avoid trouble in this line, such as stopping the progress of the work by withdrawing our men from unnecessary loss of time, and expense involved, together with unpleasant controversies and distressed relations by all concerned in the erection of the building. It is generally conceded by the workmen that sub-contracting is positively and invariably detrimental to the welfare of the art.

Sixth Question.—Give me the average number of days per annum, exclusive of Sundays and national holidays, that a sober, industrious and skillful mechanic can work in this city, and what is the remuneration per hour.

Answer.—The average number of days, as near as it is possible for us to determine, is 150 days per annum, and the average remuneration for the above is 45 cents per hour.

Seventh Question.—Are you sure that the inferior members of the union are faithful to their oath, with reference to receiving the established price per hour?

Answer.—During the past three years we have been able to prove that seven inferior members have violated their pledge of honor to the union, in reference to receiving the established price per hour. However, it may be as well to add that we deal with such members in a way entirely satisfactory to ourselves, and up to the present time we have not had a second offense from the same parties.

Eighth Question.—Do the men suffer from any disease that is directly attributable to their occupation?

Answer.—This question is not an easy one to give an intelligent reply, so far as attributing any special disease to the trade. The diseases most prevailing in the trade are, as near as we can determine, as follows: Rheumatism, paralysis, (generally caused by the effects of sunstroke), and lung diseases, brought on by much exposure to cold and damp weather. Malaria is also frequent among the men when erecting buildings in the suburban or other districts where it is bred. But the prevailing complaints among our men are of aches in the small of the back, in the region of the kidneys. Physicians do not agree that they are caused by diseased kidneys, but, on the contrary, from over-working that part of the body, caused by constant and rapid stooping and rising. To illustrate: If a bricklayer lay two thousand bricks a day, he would stoop and rise not less than fifteen hundred times per day. That part of his body (region of the kidneys) is certainly exercised to an unequal degree, compared with the rest of his body; the result is, he is continually suffering from aches in the small of the back. There are few exceptions exempt from this complaint. To further illustrate, take a piece of sheet-iron, or hoop-iron wire of any thickness, say two feet long, and bend it backward and forward to an angle of 45 degrees, the same number of times of bending that the bricklayer's back is subject to in the course of ten hours work, the effect on that part of the metal subject to the bending will give an idea of the cause of complaint bricklayers are most subjected to.

Nebraska State Association of Architects.

A WELL ATTENDED meeting of the architects of the State of Nebraska was held in St. George's Hall, Omaha, on Friday, April 23, for the purpose of forming a state association of architects. The meeting was called to order at 3 P.M., when Mr. Sidney Smith was appointed temporary chairman, Mr. John McDonald being secretary.

The chairman then stated, very briefly, the object of the meeting and the purpose of the association to unite in fellowship the architects of this state, to combine their efforts and promote the scientific and practical efficiency of the profession under the Western Association of Architects.

After some discussion, it was decided to proceed at once to the formation of a permanent organization, and, on motion, Mr. Sidney Smith, of Omaha, was elected permanent chairman, and Mr. McDonald, secretary.

A committee of three was then formed as a committee on credentials, when the following names were reported for membership:

L. Mendelssohn, G. L. Fisher, F. M. Ellis, Sidney Smith and John McDonald, of Omaha; I. F. Kuhn, Lincoln; G. L. Cole, Beatrice; C. C. Rittenhouse, Hastings.

The names of several others were presented for membership, when it

was suggested that the rules of the Western Association of Architects should be adopted. It was moved by L. Mendelssohn and seconded by Mr. Kuhn, that the convention now proceed to the formation of state association under the laws of the state and Western Association of Architects. The motion was carried.

Articles of association were then offered by the chairman and adopted, as follow:

NAME.

SECTION 1. The name of this association shall be the Nebraska State Association of Architects.

OBJECT.

SEC. 2. The objects of the association are to unite in fellowship the architects of the state, to combine their efforts in promoting the scientific and practical efficiency of the profession, and encourage the study of kindred arts.

MEMBERS.

SEC. 3. This association shall consist of active and honorary members.

QUALIFICATIONS.

SEC. 4. Any architect practising his profession in the State of Nebraska may become a member of this association.

OFFICERS.

SEC. 5. The officers of this association shall be a president, secretary and treasurer, vice-president and executive committee.

DUTIES.

SEC. 6. It shall be the duty of the president to preside at all meetings of the association, or in his absence, the duty shall devolve on the vice-president.

It shall be the duty of the secretary to take minutes of all meetings of the association, to conduct its correspondence subject to the control of the executive committee.

It shall be the duty of the treasurer to collect all funds of the association and disburse the same, on the order of the secretary and indorsed by the president.

The executive committee shall consist of four members and the president, three members of which shall constitute a quorum; it shall be their duty to exercise control over the property and interests of the association; to receive application for membership and act on the same; to consider complaints and expel members *for cause*; to act as a committee of arbitration on all questions submitted to it by members of the association; all calls for special meetings shall be indorsed by this committee.

All appeals from action of the executive committee shall be to the board of directors of western association.

AMENDMENTS.

SEC. 7. This constitution may be amended by a two-thirds vote of the members, provided that a notice of such change shall have been sent to each member ten days before date of said meeting.

BY-LAWS.

MEETINGS.

ARTICLE I. There shall be a regular meeting the first Wednesday in January, April, July and October of *each year*, at such place and time as shall be designated by the executive committee, due notice being given to each member of such place of meeting.

RULES OF ORDER.

ART. II. The meetings of this association shall be conducted according to Roberts' rules of order.

APPLICATION FOR MEMBERSHIP.

ART. III. Any person desirous to become a member shall send his application, in writing, to the executive committee; this application to be indorsed by one or more members who are personally acquainted with the applicant.

ELECTION OF MEMBERS.

ART. IV. Upon receiving an application for membership, the executive committee shall investigate the standing of the applicant, and shall by ballot admit or refuse him. All discussion on this subject to be considered strictly confidential.

DUES.

ART. V. All active members of the association shall pay an initiation fee of ten (10) dollars. All members residing in the state to pay annual dues of three (3) dollars per year, dues to be payable quarterly and prior to each regular quarterly meeting, and no person shall be entitled to vote at any meeting whose dues remain unpaid.

QUORUM.

ART. VI. Seven active members shall constitute a quorum for the transaction of business.

ELECTION OF OFFICERS.

ART. VII. All officers of the association shall be elected at the October meeting of the association; they shall be elected by a majority ballot vote of the members present. If any member of the executive committee is absent from four of its consecutive meetings, the members shall have power to declare his place vacant and proceed to elect his successor for the remainder of the term.

AMENDMENTS.

ART. VIII. The by-laws of this association may be amended by a two-thirds vote of the members present at any meeting, notice having been given as in the case of constitution amendments.

After some discussion, the by-laws as they now appear, were adopted.

Chairman: The next order of business will be the nomination for and election of officers for the ensuing year.

The nominating committee submitted their report as follows: for president, Sidney Smith, Omaha; vice-president, C. C. Rittenhouse, Hastings; secretary, F. M. Ellis, Omaha; treasurer, L. Mendelssohn, Omaha. L. Kuhn, of Lincoln, and G. L. Fisher, of Omaha, were elected as members of the executive committee.

It was moved that the rules be suspended and the secretary be instructed to cast the ballot for the ticket as reported by the committee. Carried.

Mr. Kuhn moved that the members present and those accepted be considered as charter members, and all who join before the July meeting will be included in the same, which was carried.

Mr. Ellis: I move that the chairman appoint a committee for the revision of the state statutes, also to assist the committee of the Western Association who have charge of the bill to be presented to the legislature of each state. Carried.

Chairman: I will appoint the committee at a later date.

On motion, it was decided that the annual dues should be paid in advance, and the secretary instructed to notify those not present of the action.

The chairman read a letter from Mr. McLean, of THE INLAND ARCHITECT, regretting his inability to be present, and wishing the association every success.

In response to a motion, the chairman said, "It has been moved and seconded that THE INLAND ARCHITECT be the official organ of the association, and the thanks of this meeting be tendered Mr. McLean for his good wishes." This motion was carried.

The convention then adjourned till called, and the time and place appointed by the executive committee.

National Civil Engineers.

THE work begun by the convention of civil engineers held in Cleveland, December 5 and 6, 1885, has been carried on by the executive board of the committee on national public works and the first fruits were shown in the convention for permanent organization that met at the Hollenden house, Cleveland, March 31st and April 1st. Delegates were present or en route from fifteen of the twenty-two societies in the country and represented 3,000 civil engineers. President Cooley called the convention together at 3 o'clock, and without preliminary remark made the following opening address:

Gentlemen of the National Committee: We meet today, not as a convention, but as a committee, to provide for the transformation of a temporary organization into a permanent one which, with enlarged power, may carry forward the work suggested by the convention held in this city in December last. Although few in number, we represent great interests as a working organization. We are to propose matter for the consideration of our profession, and that public which is interested in the development of our public works. In our preliminary work, three-fourths of our civil engineering societies, embracing three-fourths of the membership in the United States, have taken such interest as to appoint permanent committees on national public works, and have decided in some manner to assist in this movement. These active societies embrace nearly 3,000 civil engineers, or quite one-half of those in the United States. It is simply a question of wise deliberation on our part to so define this matter as to secure the active coöperation of the entire profession, those organized in societies as well as out, and often to educate public men and the people to a more active realization of the desirability of change in legislative and administrative methods. This result may be brought about without shock, without injustice to any, by a conservative and catholic course. In view of this matter, which the executive board will present to you, and the consideration to be given the whole matter of this committee, your president would not seem to suggest a course or to prejudice your conclusions.

In concluding, Mr. Cooley introduced Mr. Charles Latimer, president of the Civil Engineers' Club of Cleveland, who, on behalf of the local society, welcomed the delegates in a well chosen and practical address.

Mr. Latimer's address was warmly applauded, and the convention began its business by electing Mr. Walter P. Rice, of Cleveland, secretary *pro tem.*, in Mr. Blunt's absence. Mr. Rice read the call of the executive board for the convention, and the following delegates answered to their names in the roll call: John Eisenmann, Civil Engineers' Club, of Cleveland; Charles F. Loweth, Civil Engineers' Society, of St. Paul; L. E. Cooley, Western Society of Civil Engineers, of Chicago, Ill.; Robert Moore, Engineers' Club, of St. Louis; Louis J. Barbot, of Charleston, N. C., Southern Society of Civil Engineers; E. G. Gaertner, Technischer Verein, of New York; E. L. Heusner, Technischer Verein, of Chicago; Ezra D. Shreve, Ohio Society of Surveyors and Civil Engineers; D. C. Sanford, Connecticut Association of Civil Engineers and Surveyors; Alexander Dempster, of Pittsburgh, Engineers' Society of Western Pennsylvania; E. T. Abbott, of Minneapolis, Engineers' Society of Minnesota. Telegrams were read saying that the Brooklyn Society of Engineers, organized in March, and had a delegate on the way, and also that Thomas Doane, of the Boston Society of Civil Engineers; L. M. Haupt, of the Engineers' Club of Philadelphia; H. F. White, Iowa Society of Civil Engineers; T. A. Hardman, Indiana Association of County Surveyors and Civil Engineers; and G. P. Ela, Illinois Association of Engineers, would be in Cleveland to attend the meeting.

Professor Eisenmann read the report of the executive board for the past four months, a synopsis of which is as follows:

Your executive board has considered its power restricted to promoting the organization of a permanent committee. Incident to this date it has disseminated the action of the late convention, and from time to time reported the action of the several societies. It has also conducted an extensive correspondence, and issued information with a view of ascertaining the sentiments of the profession and the public at large, in order to determine what policy should guide the future action of the national committee. This information has been embodied in circulars and bulletins and our pamphlet, which have been circulated widely to the profession through the several national committees. Pamphlets and circulars have also been distributed to public men, to boards of trade and other organizations. The executive board has held two meetings, one after the December convention, and the other on March 6. In the latter a call was issued for this convention, and Mr. James Ritchie elected assistant secretary.

The following resolution adopted by the executive board was approved:

Resolved, That while the executive board does not deem itself authorized to memorialize Congress in advance of the permanent organization of the civil engineering committee on national public works, yet as it understood that a bill relating to national civil public works is contemplated, it considers events of this character as propitious aids to the work of the board, and will be pleased to furnish any information at its command that will promote the public welfare.

The secretary and treasurer's report showed that the expenditures of the executive board had amounted to \$266.58, while \$41 had been received from societies. The societies in the association had sent their contributions to the board by the delegates, but the moneys had not yet been received. With the adoption of this report, the work of the temporary committee on national public works was concluded, and the convention resolved itself into a permanent organization.

After a half hour's recess was taken, President Cooley and the officers of the old committee, who continue in power until their successors are elected, called the convention to order, and the president read the following list of committees:

Upon Organization—Messrs. Eisenmann, Barbot, and Huesner.

Upon Ways and Means—Messrs. Loweth, Shreve, and Gaertner.

Upon the Action of the Convention—Messrs. Dempster, Moore, and Abbott.

The convention on convening the next day went into a committee of the whole, President L. E. Cooley yielding the chair to Mr. Louis J. Barbot, of the Southern Society of Engineers. The report was taken up section by section and generally discussed. At 1.30 o'clock a recess was taken until 3 o'clock, when the meeting reconvened as a committee. At 4 o'clock, Professor Eisenmann read the following report of the committee upon organization, which was adopted:

To the Committee of the Council:

Your committee on permanent organization have the honor to submit the following report:

WHEREAS, The following societies embracing civil engineering in their organizations have adopted the recommendation of the December conventions relating to the appointment of a permanent committee on national public works, to wit: Boston Society of Civil Engineers, Civil Engineers' Club of Cleveland, Civil Engineers' Society of St. Paul, Civil Engineers' Club of the University of Illinois, Connecticut Association of Civil Engineers and Surveyors, Denver Society of Civil Engineers, Engineers' Club of

Philadelphia, Engineers' Club of Minnesota, Engineers' Society of Western Pennsylvania, Engineers' Club of St. Louis, Southern Society of Civil Engineers, Illinois Association of Engineers, Indiana Association of County Surveyors and Civil Engineers, Iowa Society of Civil Engineers, Michigan Engineering Society, Nebraska Association of Engineers and Surveyors, Ohio Society of Engineers and Surveyors, Technical Society of the Pacific Coast, Technischer Verband of New York and of Chicago, Western Society of Engineers:

Be it Resolved, That we, the accredited delegates of the committees of our respective societies, having perfected a permanent organization, adopt the following articles of organization:

1. That the organization be called the Council of Engineering Societies on National Public Works.
2. Its object is to promote an improved system of national public works.
3. The membership shall be composed of the members of the committees on national public works of the several engineering societies in the United States, provided that each committee shall be entitled to but one vote. Past delegates and all engineers interested in the promotion of the objects of this council may become associate members hereof with all the privileges of membership except that of voting.
4. The officers of this council shall consist of a president, a vice-president, a secretary, who shall also act as treasurer, and an executive board of seven members, including the president and vice-president.
5. Meetings to be called by the president on the request of the executive board.
6. The officers shall be elected at any regular meeting by ballot, for the period of one year or until their successors are elected. The executive board shall have power to fill, temporarily, any vacancy that may occur.
7. Two-thirds of the delegates reporting for any meeting shall constitute a quorum.
8. The order of business shall be provided by the executive board.
9. The articles of organization may be amended at any regular meeting by a three-fourths majority of the members voting.

ACTION OF THE CONVENTION.

The chair appointed Messrs. Loweth, Searles and Moore a committee upon nominations, and while waiting for the report, the following report was read by Mr. Dempster, the chairman of the committee on the action of the convention:

Your committee on action fully recognizing the importance, magnitude, and difficulties of the work undertaken, present the following report: We recommend that the executive board collect from all sources within its reach such data as may afford the fullest information on the subject and formulate a plan for the creation, maintenance, and operation of a bureau of national public works, as suggested in outline by the convention of December 5, 1885, send copies of the same to all the societies represented in the council and all others taking an interest therein, and after allowing ample time for the consideration of the same, submit it to the councils for consideration and discussion at a meeting called for the purpose.

The report was adopted, and Mr. Searles read the following list of officers nominated by his committee: President, L. E. Cooley, of Chicago; vice-president, J. B. Davis, of Ann Arbor, Mich.; secretary-treasurer, John Eisenmann, of Cleveland; executive board, L. E. Cooley, of Chicago; J. B. Davis, of Ann Arbor, Mich.; John Eisenmann, of Cleveland; Augustus Kurth, of Brooklyn, N. Y.; L. M. Haupt, of Philadelphia; R. E. McMath, of St. Louis; L. J. Barbot, of Charleston, N. C. Secretary Rice was requested to cast his ballot for the council, and the nominees were declared elected.

Mr. Loweth, of the Ways and Means Committee, presented the following report:

Your Committee on Ways and Means report as follows: In order to defray the necessary expenses of the council we would recommend that the executive board make a close estimate of the amount required for the coming year, and transmit a statement of the movement, with the request that each society raise, in any way that may seem best, as large an amount as possible by an appeal for voluntary subscriptions equivalent in amount to at least a fair proportion, based upon the active members in each society.

The report was adopted after some little discussion, and the council adjourned to meet at the call of the executive board.

MEETING OF THE EXECUTIVE BOARD.

At the meeting of the executive board Mr. L. E. Cooley was elected chairman and Professor John Eisenmann, secretary. The following sub-committees of one member each were appointed to gather information in regard to the organization and conduct of the public works of various countries, and to make digests of the same, which were to be forwarded to the secretary for the use of the board: Mr. Barbot, France and Italy; Mr. Haupt, United States; Mr. Kurth, Austria and Germany; Mr. McMath, Great Britain and Canada. The president was authorized to appoint such other sub-committees on investigation as he might see fit. Messrs. Cooley, Haupt and McMath were appointed a committee to collect and digest information bearing upon the subject of public work systems, and to formulate conclusions, which are to be sent to the societies represented in the council for discussion. As a result of its work the committee was directed to present a final report and prepare a bill for presentation to congress. The president and secretary were appointed a committee upon publication and to audit all bills.

The following resolution, intended to give an opportunity to engineers favoring the movement for the formation of a national board of public works who are located in cities having no engineering societies to assist in the work, was unanimously adopted:

Resolved, That all past delegates and the following engineers be declared associate members of this council: M. C. Kollock, of Atlanta, Ga.; William H. Searles, of Cleveland; William T. Blunt, of San Francisco; Alfred W. Buell, of Pittsburgh; D. F. Henry and D. Y. Wisner, of Detroit; O. Channut, of Kansas City; G. Bauscareu, of Cincinnati; Lyman Bridges, of San Francisco; C. H. Latrobe and Colonel J. E. Ledler, of Baltimore; W. D. Whitecomb, of Richmond, Va.; M. Partridge, of Washington, D. C.; Charles Paine, of Pittsburgh; A. P. Boller, W. S. Church, and A. Doering, of New York; and B. H. Hull, of Bridgeport, Conn.

The president appointed Mr. Searles to assist the secretary in compiling matter for publication, and appointed Prof. J. B. Davis, of Ann Arbor, Mich., a committee upon legislative information. Some little time was spent in laying out future work, and at noon the executive board adjourned to meet at the call of the president.

THE Carsley & East Manufacturing Company are fitting up large and elegant offices and show rooms at 260 Wabash avenue, for the display of their special work in interior fittings. This will be in charge of the well known designer of the company, Mr. L. F. Crosby, whose reputation as a designer in all lines of interior fittings acquired through the executed work in some of the finest residences of Chicago, has, together with the superior execution by the company's workmen, placed the larger part of the fine interior work of the city in their hands for execution. Crossman & Lee have removed to this location also, and will occupy considerable space for show rooms for mantels and stained glass works, for which this firm have a deserved reputation.

Association Notes.

NATIONAL PLUMBERS' ASSOCIATION.

THE annual National Convention of Plumbers will meet, in a beautiful spot in the midst of the Alleghenies, located on the Baltimore & Ohio Railway, early in June. Judging from an engraving, recently published in the *Sanitary News*, it looks as though the plumbers were about to take to the woods.

KANSAS CITY SOCIETY OF ARCHITECTS.

The first annual meeting of the Kansas City Society of Architects was held at the rooms of the associations April 12, 1886. The reports of the secretary and treasurer were read, and showed the society to be in a flourishing condition, with a good increase in membership since its organization. Several important matters have been presented to the society for consideration, among the number being the new building ordinances, as compiled by superintendent of buildings, T. R. Tinsley. The following were elected officers for the ensuing year: President, F. B. Hamilton; vice-president, S. E. Chamberlain; secretary, E. F. Fassett; treasurer, Geo. Carman. Trustees: A. Van Brunt, G. M. D. Knox, L. L. Levering.

ILLINOIS STATE ASSOCIATION.

At the meeting of the State Association a general discussion of the sanitary law was held. President Burnham in the chair. The Intermediate News edition will give this discussion, and the report of D. Adler, chairman of the Committee of Revision appointed at the last meeting.

Resolutions of regret upon the death of architect H. H. Richardson, were passed after which the following committee, recommended in Mr. Adler's report was appointed by the chair: Frederick Baumann, Dankmar Adler and William Holabird, after which the meeting adjourned. About twenty members were present. Among the visitors were Mr. Genung, chief health inspector, and architect Walter R. Forbush, of Cincinnati.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting of April 12 was entirely given up to the reading of a paper on "Brickwork," by Architect George Beaumont, and its discussion. The paper proved one of the most valuable and interesting of the year, and the discussion which followed was decidedly animated, many points of exceptional value to the draughtsmen being developed. The position taken by Mr. Beaumont upon the bonding of piers was assailed by the other members generally, but Mr. Beaumont sustained his points very creditably. The session was the longest the club had yet indulged in, and the meeting adjourned at a late hour. President Lawrie occupied the chair, and, in the absence of Mr. Williamson, C. W. Trowbridge acted as secretary.

The meeting of April 26 was devoted to the reception of competitive sketches of a clock tower, for which five designs were submitted, and the usual club evening sketching. The secretary read a letter from W. H. Junge resigning his membership, stating that he would be permanently absent from the city. Mr. Junge is superintendent for the Boston Terra-cotta Co. of that city, and the club, expressing regret for his absence, unanimously made him an honorary member. On motion of Mr. Lively, W. B. Lord was invited to read a paper before the club on the geological and chemical formation of our building stones.

Our Illustrations.

Diagrams illustrating paper on brickwork; by Geo. Beaumont, Chicago.

Designs for a Grant memorial for Lincoln park, Chicago; by S. S. Beman, architect.

Court House for Dane county, Madison, Wis.; by H. C. Koch, architect, Milwaukee, Wis.

Competition designs for brick mantels; by Chicago Architectural Sketch Club. First prize, Harry Lawrie; second prize, W. G. Williamson. Favorable mention, O. Enders.

Residence for D. B. McMechan, of Kansas City; by W. W. Polk & Son, architects, Kansas City. The front is of Anderson pressed brick, slate roof, oriel of copper; hot air heating apparatus; cost about \$4,000.

Residence for Chas. Ferry, at Lake Forest, Ills., by W. W. Boyington, architect, Chicago. The first story will be Chicago black artesian stone; second story, Milwaukee buff brick and timber; shingle roof; hardwood finish throughout; cost, about \$30,000.

Club house for West Chicago Club, on Throop street, facing Jefferson Park, by Adler & Sullivan, architects, Chicago; 50 by 135 feet; pressed brick front, with stone and terra-cotta trimmings. The entrance will be in the center, opening into a broad hall; library and reading rooms on one side, cloak and retiring rooms on the other. In the rear will be a dancing hall, 42 by 88 feet. In the basement will be a bowling alley, billiard room, two dining rooms, kitchen, etc. The second floor will contain private dining rooms and sitting rooms; and the third floor, the dormitory for the help. The club will occupy the building about September 1. Cost, about \$25,000, which includes the value of old buildings incorporated in the new structure.

Correspondence.

Editors Inland Architect:

Having accepted the invitation of the Chicago Architectural Sketch Club to read a paper on the Geological and Chemical Formation of Our Building Stones, and wishing to include in the paper all building stones in general use, or suitable for use, in Chicago, I wish the coöperation of quarry owners. They will oblige me by sending, at as early a date as possible, a three-inch cube of their stone, tests, the name of a building in which it is used, and such information as will be of value.

Yours very truly,
W. B. LORD,
Room 24, Old Chamber of Commerce Building.

Mosaics.

CLARK BURNETT & Co. have just closed a contract for about 700 steel shutters for the Marshall Field warehouse, Chicago.

ARCHITECT A. F. DUNLAP, of Montreal, Canada, is preparing plans for the St. James Methodist church congregation of that city. The estimated cost will be about \$150,000.

A SLIGHT fire occurred last week in the dry kiln of the works of the Carsley & East Manufacturing Co., Chicago. But slight damage was done, and none that in any way delayed the work of the firm.

THE western manager for The A. A. Griffing Iron Company, of Jersey City, N. J., Mr. T. C. Perry, now occupies 42 and 44 West Monroe street, Chicago, and will keep a large stock of the favorite "Bundy" radiators on hand.

THE frescoing, stained glass work and tiling in the Union League Club building is being executed by Healy & Millett, of Chicago. In the frescoing they have introduced "fibrous composition" relief ornaments, which is a new decorative feature.

E. D. MORRIS & Co., agents, have removed into an elegant suit of offices on the third floor of the Pullman building. A room is given to the display of tiles, stained and bevel plate glass, and partitions, showing construction in porous terra-cotta lumber, separate the apartment.

Mr. Geo. B. Sickels, long a citizen of Chicago, is about to remove to Tate, Pickens Co., Georgia, to engage in the manufacture of floor tile, at the Georgia marble quarries. We hope this enterprise will improve the facilities of contractors and builders to obtain this much desired material.

THE removal of C. E. Zimdars & Co., of New York, to 237 Mercer street, in order to obtain increased facilities for manufacturing pneumatic and electric bills and annunciators, etc., shows how the specialties of the firm are gaining in favor. The pneumatic air bell for elevators, etc., is largely in demand. The Chicago representative, L. S. Baldwin & Co., 95 Madison street, are doing an extensive business in this line.

E. & C. GURNEY & Co., of Montreal, Canada, are negotiating with The A. A. Griffing Iron Company with a view to introducing the Gurney hot-water heater into the United States. This heater is extensively used in the Canadian provinces, and offices of the company are established at Toronto, Hamilton, Winnipeg and other points. It is a sign of prosperity in Canada, as well as a recommendation for the heater, that the firm now seek a foreign market.

THE Henry Dibblee Company have increased their manufacture of fine wood mantels, and the entire floor of their establishment at 260 Wabash avenue is occupied by a handsome display of wood mantels, grates, and tiling. The tendency toward showing this class of artistic work to the greatest advantage, is prompted by the growing taste among ladies for artistically arranged interiors, and who, in a large majority, select the mantels that go into houses either new or old, either with or without the aid of their architect.

THE first water color and black and white exhibition of the Nashville Art Association will open in the Watkin's building Saturday morning, May 8, and close Saturday night, May 22, 1886. Fine works, in water color and black and white, also etchings and engravings of high merit have been loaned for the occasion, or are placed on sale. D. H. Rains, secretary of the association, is in charge of the exhibit. Miss Lida Scott, of New York City, has represented the exhibit in the East, and sent a large number of valuable contributions.

IT is pleasant to note the success, in an artistic as well as in a business sense, of such a representative of the interior decorator's and furnisher's art as G. W. Haskins, for it makes the growing appreciation of the people for artistic interiors. The growth of Mr. Haskins' business has obliged him to seek larger quarters than could be afforded him in Central Music Hall building, and he is now located at northeast corner Wabash avenue and Madison street. Mr. Haskins has carried out in a thoroughly satisfactory manner the interior decorations and furnishing of many of the most attractive residences and club houses of Chicago and vicinity.

THE use of wire cloth, as a surface for laying mortar upon, dates from its application to buildings in France in the early part of the present century, and the mortar is said to still retain its firmness. Great improvements in its manufacture have been made, and the patent stiffened wire lathing of the New Jersey Wire Cloth Company is made with a direct view to filling the demand for a slow-burning or partially fireproof construction. There is no question but that wire lath should supersede those of wood, the cost being no more, as the manner of application dispenses with furring strips, and their great value in case of fire being unquestionable.

A MEETING of the radiator manufacturing firms of the United States was held at the office of The Eaton Cole & Burnham Co., New York, April 16. The firms represented, entered into an agreement to sell all kinds of radiators, both of cast and wrought iron, at not less than 27 inches per foot of heating surface on what are known as "standard," 36 inches being standard height, and wholesale jobbers and dealers shall be entitled to a minimum price of 26 cents per foot of heating surface and no lower. In addition to these there will be arbitrary prices on special styles. The firms signing the agreement are The Walworth Manufacturing Co., of New York; Haxtun Steam Heating Co., Kewanee, Ill.; The A. A. Griffing Iron Co., Jersey City, N. J.; Crane Bros. Manufacturing Co., of Chicago; The Eaton Cole & Burnham Co., of New York; Detroit Steam Radiator Co., of Detroit, Mich.; The H. B. Smith Co., Westfield, Mass.; T. C. Joy, and Kelly Jones & Co.

THE great attention given, of late years, to the sanitary arrangements of buildings, and the better understanding of what precautionary measures are necessary to afford protection from foul and poisonous gases, have stimulated manufacturers to develop appliances to meet the latest sanitary requirements. One of the most successful concerns, in providing improved sanitary appliances, is Myers' Sanitary Depot, of New York. Their goods

are in use in many of the noted buildings, public and private, of New York and other cities, as well as in numerous village and seaside homes. Among the goods illustrated in their attractive catalogue of 1886, are the well known and popular "Dececo," "Caution," and "Niagara" closets; McFarland's improved automatic dumping flush tank; McFarland's nickel plated automatic syphon tanks, and baths and foot baths, with McFarland's patent overflow and supply. They also handle Moule's patent earth closet, so favorably known throughout the country. Architects, and others connected with building, will find much of value and interest in this catalogue.

THE Ainsworth boiler and pipe covering is rapidly gaining favor in the West. In the East this covering is and has been very popular for the past ten years. Under a former management of the western company in some instances, a cheap imitation was used that has not proved satisfactory; but the genuine Ainsworth covering which is used exclusively under the present management, for which Alfred C. Kemper, in the Opera House building, Chicago, is the representative, is said to give thorough satisfaction. Besides its record (practical and scientific), of possessing the qualities of non-conductibility, incombustibility and durability to the greatest extent, the Ainsworth covering is also very fine and neat in appearance, and everything considered, is said to be the cheapest steam boiler and pipe covering that can be bought. Among the largest contracts which were awarded to Mr. Kemper of late, number the New Board of Trade building, C. Seipp Brewing Co., Chicago, Rock Island & Pacific Railway Co., Ernst Bros' brewery, The Union Steel Co., and Bartholomae & Roesing brewery.

BRICKLAYERS, according to statistics, are more frequently subject to aches in the small of the back than to any other ailment, caused by the exertion of stooping and rising. It is also estimated that in laying two thousand bricks they will stoop and rise not less than fifteen hundred times. To enable the bricklayer to perform his work with less exertion, and consequently with greater rapidity, a bricklayer's scaffold has been patented, which takes the place of ordinary wooden horses and staging plank used on buildings of ordinary size. By it the scaffold, with bricks, mortar and workmen can be raised to the desired height with the turning of a crank, thus keeping the workmen in the most convenient height for rapid work. The cost of the scaffold is comparatively nominal, and the saving in scaffold material, the rapidity with which the work can be accomplished without changing the workmen from place to place should recommend it to bricklayers generally. Information regarding use or the right to manufacture these scaffolds at any point can be procured, for the present, by addressing THE INLAND ARCHITECT.

BAKER & SMITH COMPANY, after May 1, will be the title of the well known low pressure steam warming firm of Chicago, with J. J. Smith as president, P. S. Hudson, vice-president and treasurer, and J. H. Davis as secretary. The following circular is received:

CHICAGO, May 1, 1886.

DEAR SIR,—We beg to inform you that we have purchased the business, good will and unfinished contracts of the old established and well known house of Baker, Smith & Company of Chicago, and that we shall continue to do the same class of work as they have heretofore done, and improve upon it if possible.

Mr. P. S. Hudson, who has had entire charge of their business in Chicago and the West for the past nine years, will remain with us as vice-president and treasurer, and have entire control of the business as heretofore.

Thanking you for past favors to the old firm, and soliciting a share of your business for the new company, we are, Yours truly, BAKER & SMITH COMPANY.

Mr. Hudson, during the nine years he has had charge of the Chicago house of Baker, Smith & Company, has not only secured the confidence of every architect and owner he has placed his apparatus for, in regard to the practical value of his steam warming system, but as an honorable, genial gentleman, has made as many personal friends. Mr. Davis is also well known through his long connection with the old firm, and this new departure only indicates a union of interests and the increased confidence they have in the public and the public in them, which has called for a large increase of facilities for the prompt handling of contracts.

In the last "Intermediate News" number mention was made of the award to Merchant & Co. of the contract for one hundred and thirty-five boxes of Gilbertson's old method roofing plates for the White House at Washington. The specification under which this competition was conducted recognized the inadequacy of the traditional terms IC, IX, IXX, etc., when no brand was named to express the practical value of roofing plates. The specification called for "one hundred and thirty-five boxes, more or less, of first quality prime IC dipped Martin-Siemens steel roofing plates—sheets 14 by 20 inches—boxes to contain 112 sheets. Each bid must be accompanied by a full sample-box, and must state the brand and the average net weight per box of the roofing plates offered. No quantity less than a full box will be received as a sample, and the parties bidding, other than the successful bidder, can remove their samples as soon as the contract is awarded. The government desires to secure the best quality of dipped roofing plates, and samples showing surface imperfections or irregularities in size or weight will be rejected. Comparative tests will be made for weight, ductility, uniformity of plates and thickness and quality of coating, all of which, as well as the prices, will be considered in making the award. * * * The United States desires only the best class of materials, and parties who imagine that any other class will be received are respectfully requested not to bid." The necessity for specifying the brand is shown by a test in which plates called IC were found to vary 20½ pounds to the box, between the lightest and the heaviest. To secure a good roof uniformity in thickness of plates is also important. It is well for architects to realize that sharp competition has promoted deception in tin-plate manufacture, and that it is necessary to specify brands offered by concerns of undoubted responsibility and guaranteed in size, weight, and number of sheets, and to see that the plates specified are used, by close inspection of the work as it progresses. In as much as reliable roofing tin, with the brand and thickness plainly stamped on every sheet can be had, there appears to be no reason why the most satisfactory results cannot be obtained.

Synopsis of Building News.

THE INLAND ARCHITECT AND BUILDER has obtained quite a general expression from architects in regard to the effect the labor agitation has had and will have upon the building interests in the West. By a glance at our news columns it will be found that the architects, while in the main reporting a general depression, also report a fair amount of work in hand and much projected work that is sure to go on as soon as matters become settled. In the larger cities, some large building enterprises may be abandoned for the year. There will probably be as large or a greater number of small buildings erected this year than last. In the smaller cities, building interests have suffered little or not at all from labor troubles. It is understood, at present, that wages for labor will hereafter be based on the hour scale instead of the day, as heretofore. In this case the eight-hour movement can but little effect building, except at present, while all is in so uncertain a state. On the whole, it may safely be said that throughout the West a fair season is expected, though the loss of time will be much felt in some localities. The fact that during the past week a call for draughtsmen has come from architects in Detroit, Louisville, St. Louis, Omaha and Dubuque will further illustrate the fact that business is not so generally suspended as we might otherwise be led to believe.

Akron, Ohio.—Architects Weary and Kramer report: Labor trouble has completely stagnated the building business and prospects in our city. Although we have had no serious troubles here, the anticipation is as bad as the reality. We have work in hand in various parts of the state (reported elsewhere in this issue).

Ann Arbor, Mich.—Architects Spier & Rohns, of Detroit, report: For the Michigan Central Railroad Co., depot and other buildings. The central building will be one story, with clear story 100 by 40 feet, connecting sheds 60 by 24 feet each, outer buildings 20 by 40 feet. The buildings will be built of local granite, or field rock, trimmed around windows and other openings with the darker kinds. The water table and belt courses are to be of red sandstone. The roofs will be covered with red tile. The interior arrangement is such that the waiting-rooms do not open directly to the weather, but through a hall and lobby at each entrance, front and rear; the lobbies are to have tiled floors, and ornamental brick in walls. The waiting-rooms connect with the hall by large open arches opposite each other. A large open fire-place graces one end of the ladies' room. The finish is to be of quartered red oak, of neat design. The style is rather of the Moorsque spirit, the main entrances being large Moorish arches, as well as some of the window openings. There is a tower at one end of the main or central building. Over the main entrance the wall is carried up a second story and finished with a gable, at one side of which rises a small, round, pointed roof, turret. Platform sheds connect each side of the central building with outer buildings for baggage, express or telegraph use; the total cost of the depot is estimated at \$20,000.

Atlanta, Ga.—Architects Bruce & Morgan report: Do not think the labor agitation has, as yet, in any way affected building here. There has been several points of difference between the hands and contractors on the capitol building, but they have been adjusted without stoppage of work. There is a general spirit of improvement throughout the state, but the work is generally small. For G. H. Simpson we have made plans for two-story frame residence; cost \$3,000. Also have considerable work in various parts of the state.

Architects Adams Bros., of Chattanooga, Tenn., report: For Freedman's Aid Society, frame residence, 32 by 45 feet; cost \$4,000; making plans. Also four-story brick dining hall, 115 by 125 feet; cost \$28,000; roof on; T. C. Schneider, builder.

Adrian, Mich.—Architects Rae & Wheelock, of Chicago, Ill., report: Three-story frame hotel building, 200 by 190 feet; cost \$50,000.

Buffalo, N. Y.—Architect A. Druiding, of Chicago, Ill., reports: For Roman Catholic society, Church of the Seven Dollars, romanesque style. It is not yet determined if it will be built of brick and stone or entirely of stone; cost about \$100,000; contracts not let. Also chapel and residence for the priest, corner of Rich and Genesee streets.

Architect W. W. Carlin reports: For Geo. R. Potter, four-story brick stores and flats, corner of Niagara and Morgan streets; cost \$18,000; Rumrill & Rupp, masons; Jacob Jaekle, carpenter. For E. W. Eavens, five-story brick store building, at 85 Seneca street; cost \$10,000; Rumrill & Rupp, builders.

Architect R. A. Bethune reports: For M. B. Beemer, four-story brick stores, at 145, 147 & 149 Seneca street; cost \$25,000; Charles Berrick, contractor.

Architect M. E. Beebe, reports: For J. M. Richmond, five-story brick, iron front stores, at 87 & 89 Seneca street; cost \$18,000; Charles Berrick, contractor.

Bedford, Pa.—Architects Carr & Grodavant, of Leavenworth, Kansas, report: For Mrs. J. Lietz, brick dwelling, cost \$6,000, plans just completed.

Beaumont, Tex.—Architect Eugene T. Hainer, of Houston, reports: For J. A. Fletcher, two-story frame residence, 50 by 70 feet; cost \$7,500; contract not let.

Carrollton, Ill.—Architect Wm. Embley, of Jerseyville, Ill., reports: For Samuel Levy, two-story store building, 40 by 100 feet, brick, galvanized iron cornice, composition roof, corrugated iron ceilings, plate glass; cost \$6,500; T. M. Mercer, contractor.

Cheboygan, Mich.—Architect Joseph Cochran reports: There is at present no appearance of trouble at this place on account of the labor agitation. The building business has not yet commenced, all the work that has been done consists of general spring repairs, etc. Men are plenty and wages low. Have commenced the drawings for a three-story brick block, to be 60 by 100 feet; it is designed for stores and offices; the third story will contain a hall.

Chilesburg, Ky.—Architect H. L. Rowe, of Lexington, reports: For J. H. Graves, two-story brick residence, 45 by 65 feet; cost \$18,000; under way.

Cairo, Ill.—Architects Treat & Faltz, of Chicago, report: For Church of the Redeemer, rock-faced stone church building, 50 by 75 feet; cost \$15,000.

Canton, Ohio.—Architects Weary and Kramer, of Akron, report: For Mrs. C. Aultman, pressed brick and frame cottage, cost \$15,000; under way.

Chicago, Ill.—The past two weeks have found building interests in a very unsettled condition. First the general talk of an eight hour day in all branches of work, then the general demand for the shorter day and payment for two idle hours, which put an absolute stop to all work for at least one day (May 1), since then the socialistic element have stepped in and, by riots such as the city has not met for nine years, have destroyed the influence the trade organizations might have had. Now the situation is one of waiting. The masons are satisfied but the laborers want an advance. The carpenters are and have been receiving less average pay than any other class, and the general sentiment is to advance their wages. Some of the mills are running eight hours at ten hours' pay, some eight hours at eight hours' pay, with an advance to last year's wages where they were cut down in the winter, and some have closed down. There is a growing sentiment against the eight hour day; this is prompted both by the unwise and unreasonable demand for a general payment for ten hours work, and also by the enormous loss the reduction of time would be to those who use valuable machinery—the latter are disposed to unite in closing down until the demand is withdrawn. The architects' offices are full of plans, and some contracts are being let in the face of the agitation. One prominent architect let contracts last week for a building at exactly the same figures its duplicate was let for two years ago. In a week or two we predict, as we did in the two previous editions, that the trouble will be short lived now that demands have been made. The fact that wages in general have been reasonably good and labor is plenty, together with the amount of building "in sight" will bring about a compromise and work will go on. We think that the eight hour day for all classes is a failure, some classes of work may accomplish it, but not all, and where a compromise is made it will probably be a nine hour day and pay for ten hours.

A singular fire occurred in a residence in Chicago recently, the origin of which has given rise to considerable investigation and speculation. Mr. C. P. Kimball, a representative of a large stone contracting firm, built and furnished a residence at a cost of about twelve thousand dollars. On the day of the fire, Mrs. Kimball and son were in the front parlor, the front of which was occupied by a very large plate glass window and trimmed with heavy curtains in several folds, a low radiator was used as a seat near the window. The house was fitted with electric bells, gas, etc. A few minutes after leaving the room, Mrs. Kimball was startled by the noise as of an explosion, and going into the parlor discovered the entire front a sheet of flame, and before the fire department arrived the furniture and woodwork of almost the entire house had been destroyed. The first theory advanced was that because of the proprietor's connection with the labor troubles a year

or two ago, some explosive material had been thrown through the window. It was thought the gas had leaked and had been exploded by the electric wires, and even a stroke of lightning (from a clear sky) was offered as an explanation. It seems to us that a more sensible and perhaps correct origin of the fire could be found in the theory that the boy lit a match in some way, and the accumulated dust and inflammable material of the curtains was ignited, and the explosion heard was the heat breaking the immense window, which, letting in a strong draft, sent the flames throughout the house wherever doors were open. The liability of fires occurring in residences is very great, and while the greatest care will not always avert them, householders should, in addition, keep their personal property well insured.

Architect S. S. Beman reports: For Mrs. J. B. Lawrence, three-story dwelling, 46 by 60 feet, at 57 Lake Shore Drive, pressed brick, Connecticut brownstone; cost \$20,000.

Architects Treat & Foltz report: For Wright & Singer, five-story hotel and store building, 117 by 63 feet, corner Thirty-first and State streets; pressed brick, with brownstone and terra-cotta trimmings, slate roof; cost \$50,000. For E. J. Lehman, four-story stable and flat building, 50 by 100 feet, State, near Twenty-third street, pressed brick, stone terra-cotta; cost \$16,000. For Wendel estate, corner Forest avenue and Thirty-first street, store and flat building, 125 front, 60 feet deep, 4 stories and basement, pressed brick front, terra-cotta and stone trimmings; cost \$25,000; not let. For Judge Caton, dwelling 50 by 100, two stories and attic, pressed brick, brownstone trimmings, high slate roof, \$25,000; not let. For J. L. Fulton, dwelling on Ashland avenue, 28 by 75 feet, three stories and basement, brownstone, rock-faced front, slate roof; cost \$15,000; not let. Working on plans of all of the above, together with about \$100,000 of other work, the building of which depends largely upon the result of the labor troubles.

Architects Addison & Fiedler report: For H. Rubens, two-story dwelling, 29 by 60 feet, at 581 La Salle Avenue, Indiana pressed brick, stone basement; cost \$8,000; Muller & Schiel, masons; Steinmetz & Eilenberger, carpenters. For Wm. Menson, three-story residence, 60 by 69 feet, Vernon avenue, near Thirty-third street, Bedford stone front; cost \$12,000; John Angus, mason; Blondin & McDonald, carpenters. For John G. Neumeister, two-story residence, 20 by 45 feet, at Lake View, stone basement, frame superstructure; cost \$4,000; Robinson & Miner, masons; Blondin & McDonald, carpenters.

Architect E. Baumann reports: For Leiter & Weller, addition 80 by 160 feet, at 63 to 69 Washington street; cost \$6,000; Barney & Rodatz, masons.

Architect G. Isaacson says that he is preparing plans for four buildings that will cost about \$20,000, but work on them will be suspended until the outcome of the present labor trouble is determined. Figures were taken on the erection of one building, to cost about \$14,000, and another \$5,000, but the contractors did not feel safe to assume the risk involved at this time, and the buildings will not be commenced.

Architect J. H. Huber reports: For M. Salmon, two-story store and flat, 24 by 67 feet, on State, Fifty-second and Fifty-third streets; cost \$5,000; John Bossi, carpenter. For M. S. Brady, two-story flat building, 22 by 60 feet, at 79 Lincoln avenue, Lemont stone front; cost \$6,000; contractors, Joseph Hodson, mason; Michael Bender, carpenter. For F. E. Brookman, two-story dwelling, 28 by 47 feet, on Clark street, near Fullerton avenue; Indiana pressed brick, Lemont stone trimmings, furnace, mantels; cost \$6,000. For Mason & Siepp, alterations in building at 170 Washington street, new elevator, steam heating; cost \$7,000; Chas. Thiele, mason; John L. Dietz, carpenter. For August Weck, three-story flat building, 20 by 60 feet, 83 Walton Place, Trenton pressed brick, Connecticut brownstone trimmings; cost \$7,000; under way; J. H. McCarthy & Co., masons; Post Bros., carpenters.

Architect Wm. Thomas reports: For Mrs. S. E. McEwing, two-story dwelling, 20 by 50 feet, 842 Warren avenue, pressed brick, Connecticut brownstone trimmings; cost \$5,000.

Architect J. W. Ackermann reports: For Matt Swarts, three-story and basement and attic flat building, 24 by 80 feet, 78 Wilson street, pressed brick, brownstone and galvanized iron; cost \$8,000. Plans for several buildings suspended on account of labor troubles.

Architects McAfee & Lively report: For E. B. Needham, a frame cottage at Hinsdale, two stories, 44 by 27 feet; cost \$4,000. For Lincoln Ice Co., at Lake View, frame store and apartment building, 44 by 55 feet, two stories; cost \$6,000; not let. For P. C. Hearighty, at 415 West Fourteenth street, three-story and basement apartment building, 24 by 55 feet, limestone front and buff Bedford stone trimming; cost \$6,500; contractors, Jas. C. Sullivan, mason; John Brown, carpenter; mantels, hardwood finish and plumbing of the very best quality; Jos. B. Brien, plumber.

Architect C. E. Lohman reports: For N. Hansen, three three-story and basement, brick stores and flats, on Division street; cost \$12,000. Also barn; cost \$1,500. For A. Johnson, two-story and basement, brick and stone building, 102 Fowler street; cost \$4,500.

Architects Schaub & Berlin report: For F. C. Tumler, four-story flat building, 45 by 80 feet, Milwaukee avenue and Wood street, pressed brick, stone, galvanized iron, mantels, etc.; cost \$16,000. Plans have been made for several buildings on which figures will be asked in a week or two, unless the results of the labor movements should not be encouraging.

Architect Julius Zittle reports: For M. Naughton, three-story stores and flats, 40 by 65 feet, 211, 213 East Indiana street; cost \$11,000; C. W. Helman, builder.

Architects Furst & Rudolph report: For Conrad Furst, six-story store building, 23 to 43 Franklin street, St. Louis pressed brick, stone trimmings; cost \$70,000; under way; Mueller & Schiel, masons. For A. Shire, on Jackson street, near Ashland avenue, two-story, attic and cellar residence, 25 by 70 feet, pressed brick and brownstone; cost \$11,000; contractors, G. Lehman & Son, masons; J. W. Bent, carpenter. For John Sholl on Peoria street, near Adams, flat building, 50 by 75 feet, three stories and attic, pressed brick, brownstone trimmings; cost \$18,000; contractors, Kies & Son, masons; carpenter, M. Dold.

Architect E. R. Krause reports: For Miss Ida Shaver, three-story and basement and attic, flat buildings, 22 by 40 feet, on North State street, near Chicago avenue, Anderson pressed brick, portage sandstone, slate roof, galvanized iron, marble mantels, stained glass, etc.; cost \$5,500; contract let. A two-story dwelling, 38 by 66 feet, Denning court, Lake View, pressed brick, Ohio sandstone, slate roof, hardwood finish, steam heat, marble mantels, stained glass, etc.; cost \$10,000. A two-story and attic dwelling, 22 by 65 feet, on North State, north of Schiller street, brownstone front, slate mansard roof, hardwood finish, wood mantels, stained glass, etc.; cost \$7,000.

Architect W. Clay reports: Contract for cabinet finish in residence of Edwin Pardridge, 2808 Prairie avenue, was awarded to the Carsey & East Manufacturing Co.; cost \$15,000. Contract just let for dwelling of Edwin C. Day, two-story and attic, rock-faced Bedford stone front, hardwood finish, 33 by 58 feet, Calumet avenue and Thirty-first street; cost \$15,000. For F. S. Weigley, two-story and attic, brick and rock-faced stone front, residence 25 by 65 feet, at 521 West Jackson street, hardwood finish, etc.; Anton Moore, carpenter; M. Zuesdorf, mason. For F. S. Whiting, two two-story and cellar, rock-faced, limestone front dwellings, each 25 by 54 feet, Lake avenue and Thirty-seventh street; cost \$11,000. For Cole & Robinson, two-story and attic frame residence, on Jefferson avenue, near Fifty-fourth street; cost \$7,000. For Geo. F. Harding, alterations, two-story addition and repairs on building at 170 Madison street; a new elevator will also be placed; cost of improvements, \$16,000. For O. R. Keith, four two-story and attic frame dwellings, at Woodlawn Park; cost \$12,000. For D. B. Lyman, two-story frame cottage, at La Grange, Illinois; cost \$3,000. For Fred B. Alley, one and one-half-story colonial frame dwelling, at La Grange, Illinois; cost \$8,000. For E. M. Higgins, one and one-half story frame dwelling, at Lake Minnetonka, Minnesota; cost \$4,000. For W. A. Havemeyer, Esq., two-story and attic frame dwelling, at Riverside; cost \$3,000; contracts have been let for all of the above.

Architect C. O. Hansen reports: For the Metropolitan Theater Co., four-story theater and office building, front part of which will be devoted to offices, large entrance, etc., will be 46 by 100 feet, the theater will be 104 by 150 feet, under the auditorium will be a natatorium 104 by 72 feet; cost is estimated at \$150,000. The building is to be located on the corner of Division street and Milwaukee avenue. For C. J. Stratton, two-story and attic frame residence, 36 by 38 feet, on Barry avenue, in Lake View; cost \$6,000. For H. Osterman, three-story and basement brick flats, 25 by 60 feet, on the corner of May and Huron streets; cost \$7,000. For Mr. Trefwine, four-story and basement, pressed brick, store and flats, 25 by 85 feet, on corner of Ramsey and Emily streets; cost \$9,000. For Mr. Gerner, three-story and basement brick flat building, 25 by 60 feet, on Belden, near Lincoln avenue; cost \$6,000. For Mr. Knudson, four-story and basement store and flat building, 31 by 60 feet, on West Indiana street, pressed brick front, with stone trimmings; cost \$8,000. Finishing auditorium in Trinity church (English Lutheran), on La Salle avenue and Elm street; cost \$8,000.

Architect L. G. Hallberg reports: For M. Newhouse, two-story and basement and attic dwelling, 25 by 72 feet, on North State, near Schiller street, brick and rock-faced brownstone; cost \$12,000. For Miss Carrie White, two-story and basement dwelling, 25 by 47 feet, pressed brick front, stone trimmings; cost \$8,000. For S. E. Gross & Co., twenty-six two-story brick dwellings, near Humboldt Park. They are to be built in four blocks, 100 by 36 feet each, and cost \$30,000. For Vopica & Kubin, six two-story

and basement brick dwellings, 100 by 30 feet, on Lincoln, near Twelfth street; cost, \$8,000.

Architect W. G. Barfield reports: For Mr. Hanasen, two two-story dwellings, to be built on Burling street, in Lake View; cost \$3,000; John Rentle, builder. For A. S. Maltman, two two-story dwellings, to be erected on Wrightwood avenue, Lake View; cost \$5,000; N. A. Chapman, builder. For John O'Malley, at 323 to 333 Thirty-seventh street and Prairie avenue, two-story and basement residence, 41 by 124 feet, Indiana pressed brick, stone and terra-cotta trimmings, French slate and metal roof, furnace heat, stained glass; cost \$24,000; under way.

Architect I. C. Zarball reports: For Thos. McCormick, three-story store and flats, 26 by 80 feet, 548 West Twelfth street, Anderson pressed brick front, terra-cotta trimmings; cost \$6,000; under way; Colehour & Brain, masons; J. Donohue, carpenter.

Architect John F. Warner reports: For Wm. Hayes, Idaho street, near Harrison, two-story and basement residence, 23 by 50 feet, pressed brick, limestone and terra-cotta trimmings; cost \$4,000; contracts let. For J. E. Brown, on Washington avenue and Fifty-seventh street, frame residence, store basement, two stories and attic, hardwood finish, 30 by 35 feet; cost \$5,000; contract let. For O. J. Franchera, on Loomis and Plum streets, residence, two stories, 22 by 50 feet, pressed brick, brownstone trimmings; cost \$5,000; contracts let.

Architect C. W. Warneke reports: For A. Moldenhauer, three-story store and flats, 24 by 70 feet, at 399 Larrabee street, St. Louis pressed brick front, Lemont stone trimmings; cost \$7,000; Teched & Wendt, masons. For Hermann Hintz, two-story dwelling, 22 by 60 feet, at 22 West Thirteenth street, Indiana pressed brick, Lemont stone trimmings; cost \$4,000; the owner is the builder. For F. Schneider, three-story store and flats, 30 by 50 feet, at 234 Twenty-second street, Indiana pressed brick, Lemont stone trimmings; cost \$7,000; Guttrick, Bros., builders.

Architect August Bessler reports: For Loos Bros., three-story store and flats, 24 by 80 feet, at 763 West Twelfth street, Indiana pressed brick, Lemont stone trimmings; cost \$7,000; C. Fett, builder. For P. Gallagher, three-story store and flats, 26 by 76 feet, at 381 West Polk street, Indiana pressed brick, Lemont stone trimmings; cost \$6,000; M. Mercer, mason; Hearson & Pyne, carpenters.

Architect F. Keltienich, reports: For Thomas G. Martin, three-story flat building, 24 by 54 feet, 630 West Taylor street, Trenton pressed brick front, Lake Superior brownstone trimmings, marble mantels; cost \$9,000. For M. Dedall, three-story store and flats, 24 by 60 feet, 575 Ogden avenue, St. Louis pressed brick, Bedford stone trimmings; cost \$5,000; under way; Krieg & Demuth, masons; Kretschmer & Co., carpenters. For D. Gillman, three-story flat building, on Walnut street, near Ashland avenue, Philadelphia pressed brick and Lake Superior brownstone; cost \$8,000. For same, five-story warehouse, 66 by 140 feet, 140 Fulton street, Indiana pressed brick front, Lemont stone trimmings; cost \$18,000.

Architect P. W. Ruelh, reports: For John Schaub, four-story store and flats, 24 by 80 feet, 312 W. Twelfth street, St. Louis pressed brick front; cost \$9,000; under way; Conrad Kies & Son, masons; Peter Kauf, carpenter. For Wm. Ruelh, two-story dwelling, 25 by 60 feet, on Ashland avenue, near Taylor street, Lake Superior brownstone front, granite basement; cost \$9,000.

Architect G. Bloedner reports: For L. Kopek, four-story stores and flats, 51 by 50 feet, 470 West Erie street, St. Louis pressed brick, Lemont stone trimmings; cost \$7,500; under way; F. Dabelstein, mason; C. Bohn, carpenter.

Architect Gustav Thiel reports: For P. Bies, two-story store and flats, 25 by 76 feet, 733 Milwaukee avenue; cost \$5,000; under way; Reebe & Nissen, builders. For H. Sweet, twenty-eight two-story cottages, 20 by 42 feet each, Holstine's addition to Jefferson, Anderson pressed brick, stone foundations; cost \$52,000. For Wm. Wendorff, three-story dwelling, 25 by 76 feet, North avenue and Girard street, Anderson pressed brick, Lemont stone trimmings; cost \$5,500. For F. Voels, two-story flat building, 25 by 76 feet, 50 Cornelia street, pressed brick front; cost \$6,000; under way.

Architect H. Hildinger reports: For Wm. Eilers, three-story dwelling, 22 by 68 feet, 575 West Thirteenth street; cost \$5,000. For Joseph Moresch, three-story store and flats, 23 by 68 feet, 203 West Taylor street, pressed brick front; stone trimmings; cost \$6,500.

Architect C. E. Kaufmann reports: For John McCormick, two-story dwelling, 22 by 45 feet, 3616 Grand boulevard, buff Bradford stone front; cost \$9,000; under way; S. K. Wakeman, mason.

Architect H. Sierks reports: For John Ott, two-story dwelling, 25 by 50 feet, at 119 Evergreen avenue, St. Louis pressed brick, Lemont stone trimmings; cost \$7,000; C. Meister, mason; Peter Ott, carpenter.

Architect J. F. Doerr reports: For Adam Fraatz, three-story flat building, 25 by 76 feet, 3229 Wentworth avenue, Indiana pressed brick, Lemont stone trimmings; cost \$7,800; Guttrick Bros., masons; M. Schmidt, carpenter. For Mrs. E. Buddinger, three-story store and flats, 25 by 70 feet, 2449 Wentworth avenue, Marquette brownstone front; cost \$9,000; under way; Geo. Schneider, mason; Patta Bros., carpenters. For John Aye, three-story store and flats, 24 by 70 feet, 2508 Wentworth avenue, Indiana pressed brick, Lemont stone trimmings; cost \$8,000; under way; Geo. Schneider, mason; Chris. Kees, carpenter. For F. Homan, three-story stores and flats, 50 by 80 feet, 3654 Wentworth avenue, Indiana pressed brick, Lemont stone trimmings; under way; Geo. Schneider, mason; John Kraus, carpenter.

Architect S. Linderott reports: For H. W. Hanson, four-story store and flat building, 26 by 67 feet, 97 East Chicago avenue, Anderson pressed brick, Euclid sandstone trimmings, excelsior roof, marble mantels, partly hardwood finish; cost \$9,000; John Woodstrom, mason; John Larsen, carpenter.

Architects Wm. Stripleman & Co. report: For M. Finnegan, three-story store and flats, 24 by 95 feet, 647 West Indiana street, Anderson pressed brick, blue Bedford stone trimmings; cost \$10,000; Hayes Bros., masons. For John Rueter, corner Morgan and Twelfth streets, three-story, basement and attic, stores and flats, 40 by 100 feet, Anderson pressed brick, Connecticut brownstone trimmings, terra-cotta; cost \$23,000; contractors, Kies & Son, masons, and Peter Kauff, carpenter. For L. Jensen, three-story and cellar flat building, on Mohawk street, Anderson pressed brick, blue Bedford stone trimmings, 25 by 56 feet; cost \$7,000; contractors, L. Weicks, mason; J. Kistel, carpenter.

Architect L. G. Hallberg reports: For T. S. Shay, two-story dwelling, 25 by 44 feet, at 419 Superior street, Anderson pressed brick and Lemont stone; cost \$6,500; C. W. Damier, mason; Hoff & Kiltz carpenters. For E. B. Turner, double three-story dwelling, 35 by 44 feet, on Hurlbut street, near Lincoln avenue, pressed brick, terra-cotta, galvanized iron, slate roof, furnace heat, mantels, etc.; cost \$8,000.

Architects Ostling & Bourgeois report: For J. J. Sloan, three-story and basement, store and flat building, 49 by 70 feet, Chicago avenue and Market street, pressed brick, brownstone; cost \$10,000.

Architect C. C. Miller reports: For Henry Heberd, three-story store and flat building, 24 by 60 feet, pressed brick, stone, terra-cotta, galvanized iron; cost \$7,000.

Architect Theo. Karls reports: For H. Brockhaus, two-story store and flats, 25 by 70 feet, at 636 N. Clark street, Anderson pressed brick, brownstone trimmings; cost \$6,000; Leo, Kabele, mason; Adam Spiess, carpenter.

Architect H. R. Wilson reports: For Hon. —, Mason, two two-story dwellings, 87-6 by 60 feet, Walnut, near Wood street, pressed brick, brownstone, terra-cotta, stained glass mantels, etc., furnace heat, cost \$7,000. For J. Hallenbach, two-story and cellar dwelling, 38 by 58 feet, Warren, near Albany avenue, pressed brick, stone; cost \$3,000. For J. H. Thomas & Son, five-story store and flat building, triangular, with 95 feet front on Lincoln avenue and 135 feet on Garfield avenue, pressed brick, with brownstone and terra-cotta trimmings; cost \$40,000; contracts not let.

Architect J. J. Flanders reports: Four-story school building, 87 by 118 feet, Twentieth and Johnson streets, pressed brick, stone, terra-cotta, galvanized iron, steam heat; cost \$45,000.

Architects Rae & Wheelock report: For P. Fitzpatrick, three-story store and flats, 441-443 Ogden avenue, Anderson pressed brick front, Connecticut brownstone trimmings; cost \$14,000; under way; N. Cameron, mason; P. Fitzpatrick, carpenter.

For Robert Rae, two-story dwelling, 28 by 46 feet, Seventy-first street and Webster avenue, Englewood, Anderson pressed brick front; cost \$5,000; Anson Moore, mason. For C. Nichols, on Grand boulevard, north of Thirty-seventh street, east front, two-story cellar and attic residence, front, Hummelstown brownstone, pressed brick, copper trimmings, high pitched roof, 30 by 70 feet; cost \$15,000; finished in hardwood, steam heat, and all modern improvements. For Wm. F. White, on Oakenwald avenue, south of Forty-third street, east front, block of three houses, 60 by 63 feet, two stories, basement and attic, pressed brick and brownstone trimmings, hardwood finish, all modern improvements; cost \$16,500. For Lewis H. Bisbee, on Vincennes avenue, south of Thirtieth street, block of four houses, 79 by 70 feet, two stories, cellar and attic, pressed brick, brownstone trimmings, two bay fronts; cost \$23,000. For C. S. Hutchins, block of three houses in Hyde Park, on Jefferson avenue, near Fifty-third street, east front, two stories, cellar and attic, French roof, pressed brick, brownstone trimmings, copper cornice, red slate on mansard, 60 by 63 feet; cost \$15,000.

J. J. Connellan reports: For John Hyland, two two-story and basement dwellings, 22 by 50 feet, Park, near Homan avenue, pressed brick, brownstone, galvanized iron, mantels, etc.; cost \$10,000. For I. G. Loeber, two-story and cellar and attic dwelling,

25 by 72 feet, Congress near Loomis street, pressed brick, brownstone, slate roof, mantels, etc.; cost \$9,000. For Philip Reedy, two-story store and flats, 24 by 70 feet, 613 Thirty-first street, Anderson pressed brick front, Portage stone trimmings; cost \$6,500; under way; John Gallagher, mason; C. P. McKay & Co., carpenters.

Cincinnati, Ohio.—Reported by L. Mendenhall: Our Builders' Exchange is pushing ahead, new members being received daily almost, and its influence is constantly felt for good throughout all branches of building. The new building laws are in the hands of the legislature, and when passed, as they will undoubtedly be, will accomplish many much needed reforms. The trade of Columbus and Cleveland are much interested in them, and giving the laws their close attention, as they will become operative in all the cities of the first class in the state. Political affairs, which have a very decided effect upon building, are in a much more healthy, honest state than heretofore, and "the rascals of both parties are on the run," and find it necessary to seek a change of climate. Every builder in Cincinnati and elsewhere owes it to himself and the community to support every honest effort for reform, regardless of party. Everything here points toward a busy season, the only bugbear in the way of its fulfillment being the fear that mechanics will demand ten hours pay for eight hours work, thus adding twenty per cent to the cost. However, we will live in hope even though we die in despair. Upon every side excavations are going on, while in like manner are seen buildings in a state of progress or almost completed. Our streets are badly torn up for the granite pavements, and for five months, fully, will remain more or less so; but if good, honest work is performed, we can afford to suffer the inconvenience for the sake of a much needed improvement. Our Art Museum will be dedicated next month, and is, undoubtedly, Mr. McLaughlin's *chef-d'œuvre* of all his plans.

Architects Crapsey & Brown report: For W. H. & Geo. L. Cox, Maysville, Ky., a row of seven houses of brick, three stories high, with mansard roof; cost \$18,000. For the same parties, a brick store, 76 by 100 feet, four stories high; upper floors for offices and masonic hall; \$25,000. Dwelling of frame, three stories, twelve rooms, hardwood finish, tile roof, for Geo. L. Cox, Esq., Maysville, Ky.; cost \$8,000; other plans in progress.

Architect Theo. Richter, Jr., reports: For F. J. Drucke, Esq., Covington, Ky., a brick dwelling of ten rooms, two-and-a-half stories, slate roof; cost \$4,000. For Dr. L. A. Querner, a four-story pressed brick, 24 by 100, to be devoted to flats, contains fifteen rooms, with tin roof; cost \$8,000. A frame dwelling for F. A. Hahn, Esq., two-and-a-half stories, ten rooms and slate roof; \$6,000. For John Pohlmann, a pressed brick, 40 by 75, store and flat building, three-and-a-half stories high, containing twenty rooms; \$8,000. A frame dwelling, two-and-a-half stories, containing ten rooms, for D. W. Robb, Esq., Amherst, Nova Scotia; cost \$7,000. A row of three pressed brick dwellings, for A. Betts, Esq., each containing eight rooms, with tin roof; cost \$9,000. Time well occupied.

Architect Jas. W. McLaughlin reports: For Miss M. Louise McLaughlin, a two-story, ten-room, brick dwelling, with hardwood finish; furnished with Wilson's rolling blinds. For Jos. Weil, Esq., a brick dwelling of ten rooms, two-and-a-half stories, slate roof and hardwood finish.

Architect Geo. W. Rapp's time well occupied, as well as E. Anderson's, Hannaford's, Drach's, and Smith & Forbush's.

Wm. Martin Aiken, a graduate from H. H. Richardson's practical and much coveted school, and formerly with J. W. McLaughlin, has opened an office, and already has his time well occupied.

Clinton, Iowa.—The strike is the all absorbing topic of the day, and projected work has stopped until the labor troubles are arranged. The scarcity of money, caused by poor crops and low prices last year, will prevent improvements, and the probabilities are that a dull season will be the result.

Coldwater, Mich.—Building outlook fair. All good mechanics are busy. Architect M. H. Parker reports: For Coldwater Road Cart Co., addition to factory, 48 by 120 feet; cost \$3,000; frame up; E. B. Sexton, builder. For Dyce Chapman, two-story frame dwelling, 28 by 36 and 18 by 20 feet; cost \$3,500; commenced; E. B. Sexton, builder.

Columbus, Ga.—Architects Bruce & Morgan, of Atlanta, report: For John Blackmar, two-story frame residence; cost \$3,000; under way.

Creighton, Neb.—Architect N. L. Raymond reports: Present outlook is good. It is not thought that the labor troubles will have any effect on the building interests, unless the shipping of lumber is stopped. Have plans for several buildings to be erected, also several small buildings, costing \$500 to \$1,000; under way.

Dallas, Tex.—Architect S. Nelson, reports: The present condition is dull, but the outlook is good for the near future. Labor agitation is giving us but little trouble, if any. Have in hand, at present, several small frame buildings under way.

Denver, Col.—Architect F. C. Eberley reports: For Rudolph Schanfelberger, two-story and cellar brick building, 25 by 78 feet; cost \$5,000; excavating under way; Carl Bruchue, carpenter; S. Bohlen, mason. For Mrs. Julia Grace, two-story brick building, 25 by 56 feet; cost \$2,100; excavating; Carl Bruchue, builder.

Architects F. E. Edbrooke & Co., report: Building outlook for spring and summer is good. Following is the work at present in hand: For county of Bernallles, N. M., county court house, 70 by 80 feet, stone building, all brick interior walls, fireproof; cost \$60,000; contract let May 3. For Sturley-Estabrook Mercantile Co., four-story and basement store warehouse, 62 by 125 feet, all modern improvements; cost \$45,000; first story up; Harvey Bros., contractors. For A. L. Ferrin, four-story and basement furniture store, 50 by 123 feet, brick and stone front; cost \$20,000; basement up; W. Thompson, contractor. For W. S. Wright, residence, 33 by 60 feet; cost \$6,000; first story up; Vanstone Bros., contractors. For C. W. Wright, pressed brick residence, 35 by 52 feet, steam heating; cost \$10,000; foundation commenced; A. B. McDonald, builder. For Weber, Owen & Co., two-story and basement building 50 by 100 feet, stone, iron front; cost \$9,000; commenced May 1; Hallack & Howard, builders. For E. E. Waugh, two-story residence, 23 by 35 feet; cost \$2,900; commence May 1. For Unity Church Society, brick church building 70 by 85 feet, stone basement and heavy stone trimmings; cost \$20,000; plans completed. For Wm. Clark, two-story store building, 50 by 125 feet; cost \$13,000; preparing plans. For Colorado News Co., three-story and basement block, 25 by 120 feet; cost \$10,000; plans in preparation. For the Collander Billiard Co., two-story hall building, 50 by 125 feet; cost \$8,900; plans completed.

De Smet, D. T.—Architects C. G. Maybury & Son, of Winona, Minn., report: For Kingsbury County Bank, two-story brick bank building, 25 by 50 feet; cost \$3,000; projected.

Detroit, Mich.—New work seems very quiet at present, and the outlook very uncertain. If labor matters become settled after May 1, much work may go on, otherwise we will probably not see a spring boom.

Architect Mortimer L. Smith reports: For J. M. Jameson, three-story dwelling, 40 by 45 feet, brick, stone trimmings, slate roof; cost \$8,000; Topping & Fisher, builders. For A. C. Fisher, two-story double dwelling, 38 by 62 feet, brick, stone trimmings, slate and gravel roof; cost \$6,000. For H. A. Chauncy, two-story dwelling, 46 by 60 feet, brick, stone trimmings, slate and tin roof; cost \$12,000; Patrick Dee, mason; Henry George, carpenter.

Architect W. E. Brown reports: For Brush Estate, block of four two-story stores, 83 by 100 feet, brick, stone trimmings, gravel roof; cost \$30,000. Topping & Fisher, builders.

Architect Peter Dederichs reports: For N. Christa, block of two two-story stores and dwellings, 54 by 54 feet, brick, stone trimmings; cost \$7,400. For E. Youngblood, two-story store and dwelling, 24 by 65 feet, brick, gravel roof; cost \$2,500; Jno. P. Martz, builder. For Aloys Krug, block of two two-story stores and dwellings, 22 by 61 feet, brick, stone trimmings, gravel roof; cost \$2,500. For James Weidenbach, two-story store and dwelling, 25 by 58 feet, brick, stone trimmings; cost \$4,200.

Architects Mason & Rice report: For S. B. Dixon, two-story dwelling, 45 by 65 feet, brick, stone trimmings, slate roof; cost \$17,000; Henry George, builder. For Hammond & Standish, two-story packing house, 100 by 100 feet, brick, gravel roof; cost \$17,000; A. A. Albrecht, mason; Nuppenan & Clark, carpenters.

Architect A. E. French, reports: For John Robinson, two-story dwelling, 24 by 70 feet, brick, stone trimmings, slate and tin roof; cost \$4,500. For Geo. H. Parker, four-story store, 23 by 65 feet, brick, stone trimmings, gravel roof; cost \$5,000. Also two-story barn, 30 by 54 feet, brick, stone trimmings, slate roof; cost \$3,500. For Abbie Van Boelen, two-story dwelling, 42 by 75 feet, brick, stone trimmings, slate and tin roof; cost \$5,500; John Brennan, builder.

Architect C. B. Cole reports: For J. H. Holmes, three-story boarding house, 39 by 30 feet, brick, stone trimmings, tin roof; cost \$5,000; W. G. Vinton, carpenter; G. W. Buffum, mason. For C. H. Leonard, three-story dwelling, 28 by 26 feet, brick, stone trimmings, tin roof; cost \$5,000; Durst & Wood, carpenters; G. W. Buffum, mason.

Architects Scott & Co. report: For Wm. E. Howard, two-story dwelling, 34 by 63 feet, brick, terra-cotta and stone trimmings, slate roof; cost \$7,400; Henry Carew,

builder. For E. T. Adams, two-story dwelling, 40 by 52 feet, brick, terra-cotta and brownstone trimmings; cost \$10,600; McGrath & Wallace, carpenters; Harry Chandler, mason.

Architect R. T. Brooks reports: For J. W. Frisbie, two three-story dwellings, each 30 by 72 feet, stone, hardwood finish; cost \$10,000 each; F. Julien & Co., builders.

Architect W. E. Higginbotham reports: For Bella Hubbard, two-story dwelling, 35 by 65 feet, brick, stone trimmings, slate roof; cost \$6,000.

Architects E. E. Meyers & Son report: For H. J. Rice, two-story store, 20 by 60 feet, brick, gravel roof; cost \$2,800.

Architect A. C. Varney reports: For Mrs. Maxwell, two-story double dwelling, 42 by 64 feet, brick, stone trimmings, slate roof; cost \$7,000; projected. For Wm. Rickey, two-story double dwelling, 44 by 60 feet, frame; cost \$4,000; projected. For Ben. Johnston, two-story dwelling, 24 by 42 feet, brick and frame; cost \$2,500; projected.

Nicol Mitchell is building for the Detroit and Milwaukee Elevator Co. a grain elevator 80 by 56 feet, 122 feet high, stone, wood and iron, slate and metal roof; cost \$40,000.

H. S. Peoples is building for himself, a block of two two-story stores and dwellings, 40 by 60 feet, brick, stone trimmings, gravel roof; cost \$6,500.

M. W. Scovel is building for the Grand River Street Railway Co., car house, 32 by 80 feet, stables 72 by 120, blacksmith shops, 20 by 40 feet, frame, shingle roof; cost \$4,000.

Wm. Carson is building a two-story dwelling, 50 by 50 feet, brick, stone trimmings, slate roof; cost \$8,000.

H. J. Davis is building for Dr. C. C. Vemans, four two-story dwellings, each 26 by 55 feet, shingle roof; cost \$8,500.

Messrs. Biegrin & Daleckis are building for the Polish Sisters of St. Francis, four-story chapel, 88 by 80 feet, brick, stone trimmings, gravel roof; cost \$20,000.

Architect A. C. Varney reports: For Wm. A. Butler five-story and basement business block, 50 by 80 feet, brick, stone trimmings, gravel roof. The front will be of gray granite up to second story, piers rock-faced. The cornice is entirely of redstone and brick; considerable terra-cotta decorates the front, and a striking feature is the bayed fronts of the offices on the second, third and fourth floors. The rooms on the first floor on either side of a wide hall are for banks. The large hall is carried through every story from front to rear of the block, off from which is a spacious stairway and an elevator. The finish on the first or bank floor is to be white oak, there will be paneled wainscoting throughout this floor, and the ceilings will be paneled. The other stories will be finished in red oak; cost of the building will be \$40,000; Albert Albrecht, mason; Knapp & Avery, cutstone; J. B. Wilson, ironwork. For Star Dockage Co. two-story brick warehouse 100 by 100 feet, gravel roof; cost \$8,000; Candler Bros., builders. For Methodist congregation chapel, 32 by 62 feet, brick, stone trimmings, slate roof; cost \$4,000; W. H. Sherman builder. For Mrs. A. W. Clark, two-story dwelling, 31 by 65 feet, brick, stone trimmings, gravel roof; cost \$8,000; Lloyd & Flewelling builders. For James McMillen, two three-story, 50 by 60 feet, and four two-story, 45 by 91 feet, stores, brick, stone trimmings, slate roof; cost \$16,000; projected. For G. K. Branden, three-story dwelling 40 by 64 feet, brick, stone trimmings; cost \$9,000; projected. For Mr. Huher, two-story store, 35 by 60 feet, brick, stone trimmings, gravel roof; cost \$4,500; projected. For Edward Bromley, three-story dwelling, 28 by 62 feet, brick, stone trimmings, slate and tin roof; cost \$5,500; projected.

Architect H. Englebert reports: For Polish parish, two-story rectory, 40 by 52 feet, frame, shingle roof; cost \$5,000. For Mrs. Elizabeth Michelson three-story store, 27 by 105 feet, brick, stone trimmings, gravel roof; cost \$5,300; F. Scheibner, mason; Gordon Bros., carpenters.

Architect C. Vandamme reports: For E. Bidegare, two-story store and dwelling, brick, stone trimmings, gravel roof; cost \$4,500; Henry Carew builder.

J. D. Hawkes, engineer for the M. C. R. R., has planned for that company a one-story freight house 418 by 56 feet, brick, slate roof; cost \$15,000.

E. A. Walshe has planned and is building for Henry C. Moore, a two-story dwelling 48 by 72 feet, brick, stone trimmings, gravel roof; cost \$10,000.

H. W. Holcomb is building for himself a three-story dwelling 36 by 48 feet, brick, stone trimmings, gravel roof; cost \$7,000.

Geo. E. Depew is building for himself a two-story dwelling 30 by 45 feet, brick, stone trimmings, slate roof; cost \$4,000.

Building permits were issued during March for new buildings to cost \$319,815; alterations, \$18,760; total, \$338,575.

Daylestown, Ohio.—Architects Weary & Kramer, of Akron, report: For Odd Fellows and Knights of Pythias, brick block for hall purposes; cost \$7,500; David Myers, builder.

Dubuque, Iowa.—Architect F. D. Hyde, reports: The prospects of labor troubles extending to all parts of the country, will undoubtedly affect building operations unfavorably here as elsewhere, though there is, at present, no particular change apparent, except in the general advance in prices. For J. K. Farley, two-story frame cottage, 33 by 35 feet; cost \$3,000. For Richard Cox, remodeling business block; cost \$5,000; plans made. For Schenkowitz & Rose, double brick residence, 40 by 64 feet, two-story and attic; cost \$4,500; plans under way.

Easton, Ga.—Architects Bruce and Morgan, of Atlanta, are about to let contracts for a two-story, thirty-room brick hotel to be erected here.

Edgewood, Ga.—Architects Bruce & Morgan, of Atlanta, report: For J. P. McDonald, one-story frame dwelling; cost \$3,000; contract not let.

Elkhart, Ind.—Architects N. Weaver & Son report: Many small dwellings are under way. Prospects for extensive buildings are not flattering. Labor troubles seem to have produced a lack of confidence in all business projects. Have plans for improvements in M. E. church; cost \$5,000; projected; contract not let. Two-story office building for F. C. Eckleman, previously mentioned, is under way; also, frame cottage for J. M. Shelby.

Architect Cass Chapman, of Chicago, Ill., reports: For Elkhart County, a two-story and basement almshouse, 200 by 150 feet, brick; cost \$30,000.

Ellsworth, Kan.—Architects Carr & Grodavent, of Leavenworth, report: For Masonic Hall Association, opera-house and masonic hall; cost \$18,000; plans completed.

Evansville, Ind.—Architects Reid Bros. report: Parties contemplating building are holding off, awaiting a settlement of the labor troubles. Contractors, on account of the eight hour arrangement, propose to estimate 20 per cent above present rates. For L. Preston & Co., three-story brick addition, 26 by 80 feet, to factory building; cost \$2,000; under way; Chas. P. Stoltz, builder. For L. Loenthal & Co., brick addition to store, 40 by 50 feet; cost \$5,000; under way; J. S. McKorkee, builder. For Colonel Jas. Montgomery, brick stores, 75 by 90 feet; cost \$20,000; projected. For Chris. Daecher, brick stores, 20 by 130 feet; cost \$7,000; under way; Henry Weiss, builder; Geo. L. Mesker, iron work.

Galesville, Wis.—Architects C. G. Maybury & Son, of Winona, Minn., report: For Bank of Galesville, two-story brick bank building, 25 by 80 feet; cost \$6,000; projected.

Galveston, Tex.—Architect Eugene T. Heiner, of Houston, reports: For Frank L. Lee, two-story frame residence, 48 by 74 feet, slate roof; cost \$9,800; under way; Toothacker & Knight, builders. For Wm. P. Owens, four one-story frame cottages, 36 by 65 feet, slate roofs; cost \$10,000; contracts not let.

Grand Island, Neb.—Architects Mendelssohn & Fisher, of Omaha, report: For W. L. Eastman, frame cottage; cost \$2,500.

Hamilton, Ohio.—Architect Max Rentti reports: Although it is very unlikely that we will have strikes here, the uncertainty of the situation has a detrimental effect to business in general as well as to the building trades. One factory alone, for instance, being kept from making improvements in enlarging their shop to the amount of about \$50,000. Have the following work in hand: For Niles Tool Works, two-story brick pattern building, 74 by 100 feet, iron roof, sky-lights; cost \$5,880; contract let to J. F. Bender & Bros. Co., for C. Benninghofer, business and flat building; cost \$9,890, exclusive of plumbing, steam heating and excavation; contract let to Eisel & Melford. For A. Hafertegen, two-story store and dwelling, brick, shingle roof; cost about \$2,300; projected. For Allen Andrews, repairs and remodeling frame dwelling; cost about \$1,600.

Hudson, Ohio.—Architects Weary & Kramer, of Akron, report: For school board, brick school house; cost \$8,000; contract not let.

Hummelstown, Pa.—Architects Carr & Grodavent, of Leavenworth, Kansas, report: For E. M. Hoffer, residence; cost \$5,000.

Hannibal, Mo.—Architects Coddington & Hogg, of Kansas City, report: For P. Tucker, one-story frame cottage, taking figures.

Houston, Tex.—Architect Eugene T. Heiner reports: Present outlook is not good for a large amount of work the present year, although hopes are entertained, that it

may improve later on. For Gonzales county, Texas, two and one-half story jail building, 40 by 100 feet, brick walls, slate roof, I-beams, cement floors, corrugated iron ceilings; cost \$38,000; work just commenced; Henry Kane, general contractor; Smead & Co. Iron Works, of Louisville, Ky., iron and steel work. For Austin county, Texas, three-story brick court house, 70 by 100 feet, slate roof; cost \$38,000; contract will be let May 11. For Adam Clay, one-story brick store, 60 by 55 feet, tin roof; cost \$3,300; under way. For Jacob Binz, three-story brick store building, 53 by 100 feet, first story iron front, tin roof; cost \$20,000; contract not let; also, considerable work in other parts of the state, reported elsewhere in this issue.

Jacksonville, Fla.—Architect H. B. Beebe, reports: Fair amount of building being done, and future prospects good. Labor agitation has not reached here yet. Have completed for C. B. Hazeltine, three-story brick store and office building, internal alterations.

Jerseyville, Ill.—Architect Wm. Embley reports: For Judge G. W. Herdman, two-story store building, 24-3 by 90 feet, brick, galvanized iron cornices, tin roof, plate glass; cost \$5,000; contract not let. For Holliday & Shaffer, two-story store building, 50 by 83 feet, brick, galvanized iron cornice, tin roof, plate glass; cost \$5,500; contract not let. For Patrick Harington, two-story livery stable, 50 by 90 feet, brick, galvanized iron cornice, tin roof, plumbing; cost \$4,000; contract not let.

Kane, Ill.—Architect Wm. Embley, of Jerseyville, Ill., reports: For Miss Julia Christy, frame residence, 50 by 53 feet, Eastlake style, slate roof, marble mantels, stone cellar and foundations; cost \$3,800; under way; Robert H. Clark, contractor.

Kansas City, Mo.—Architect E. F. Fassett reports: Outlook for building is fair, not so much as was anticipated the first part of the year. Railroad strikes have caused trade to become somewhat dull. The unhealthy "boom" of real estate, by some classes of dealers, in selling options, is effecting building more than the railroad strikes. For Martha Purvis, two-story and basement hotel, 40 by 70 feet, stone basement, frame superstructure; cost \$5,000; under way; T. O. Coombs, builder. For Dr. Humphries, two-story brick dwelling, 31 by 52 feet; cost \$4,000; projected. For M. F. Simmons, frame dwelling 43 by 60 feet; cost \$3,800; projected. For Albert Marty, two-story brick stable, 22 by 46 feet; cost \$2,500. For same, five-story and basement brick warehouse, 80 by 100 feet; cost \$40,000; under way. For J. W. Le Slavens, alterations and additions to brick dwelling; cost \$5,000; under way.

Architects Coddington & Hogg report: We have lost but one building on account of the strike, between it and the real estate boom, the building interests have been considerably retarded. For H. P. Jaques, brick and terra-cotta residence, 42 by 86 feet; cost \$11,000; projected.

In our April issue the two following items were by mistake placed under Kawkawlin, Mich., news:

Architect F. B. Hamilton reports: For English Bros., five-story and basement brick building, 48 by 108 feet, stone trimmings, gravel roof; cost \$22,000; plans nearly completed. For A. Altman, two-story and basement brick dwelling, 20 by 45 feet; cost \$4,000; also alterations, to cost \$500; under way. For Ashgrove Lime Association, one-story frame warehouse, 38 by 100 feet; cost \$1,800; plans made.

Architect Geo. Carman reports: For C. McBride, five-story brick building, tin roof; cost \$4,500; under way. For V. C. Buck, three-story brick building; cost \$30,000; under way. For Mathew Butler, three-story brick building, slate roof; cost \$8,000. For J. W. German, two-story brick dwelling, slate roof; cost \$7,000; under way.

Architects W. W. Polk & Son, report: The strike has slightly effected building interests, but the big real estate boom that is now at its height has killed more projected buildings than a dozen strikes would. Only a few of our architects are busy. We have the following work in hand: For J. H. Banerlin, two story residence, 39 by 67 feet, brick, slate roof; cost \$8,000; under way; S. H. Beverden, builder. For M. A. Diaz, two-story residence, 24 by 61 feet, slate roof; cost \$4,000; under way; M. A. Diaz, superintendent. For Dr. Bell, four-story store, brick building, 75 by 88 feet; cost \$30,000; projected. For Peter Otto, two-story frame dwelling, 26 by 45 feet; cost \$2,500; projected.

Laporte, Ind.—Architect Cass Chapman, of Chicago, Ill., reports: For Laporte County, an almshouse, two-stories and basement, 200 by 150 feet; cost \$20,000.

La Crosse, Wis.—Architects C. G. Maybury & Son, of Winona, Minn., report: For M. Funk, three-story brick store, 36 by 86 feet; cost \$9,000; projected. For H. Berger, three-story store, 45 by 80 feet; cost \$8,000; under way.

The great fire in the lumber district April 6, caused a total loss of \$562,000. Insurance \$60,000.

Architect Clinton J. Warren, of Chicago, Ill., reports: For Chicago, Burlington and Northern Railroad Company, brick round-house; cost \$50,000.

La Grange, Tex.—Architect Eugene T. Heiner, of Houston, reports: For A. T. Bradshaw, two-story frame residence, 40 by 50 feet; cost \$4,500; contract not let.

Leavenworth, Kan.—Architects Carr & Grodavent report: Several projects are being held back, the excuse being to see what effect this disposition to strike is going to have on the general affairs of the country. We have the following work in hand: For O. B. Taylor, brick residence nearly completed; cost \$15,000; Wm. Schroeder, builder. For Wm. Dodd, remodeling residence; cost \$3,500; plans in preparation. For Giacomini Bros., addition 48 by 70 feet to "Delmonico" Hotel; cost about 10,000; plans ready for bidders. For A. J. Tullock, frame residence; cost \$5,500; projected. For John Gumper, remodeling residence; cost \$2,000; plans under way. For James McGee, frame residence; cost \$3,500; under way. For T. J. Weed, alterations to store building; cost \$2,000; under way; E. H. Farrell, contractor. For the Soldiers' Home, near Leavenworth, we are preparing plans for a governor's residence to cost about \$10,000; treasurer's residence, to cost about \$6,000; engineer's cottage, cost about \$1,500. Have also in charge other buildings at the home, to cost about \$250,000; J. A. McGougle, contractor.

Lincoln, Neb.—Architects Mendelssohn & Fisher, of Omaha, report: For Eli Plummer, brick residence; cost \$9,000.

Lausling, Mich.—Architects Mason & Rice, of Detroit, report: For M. D. Chatterton, two-story dwelling, 35 by 60 feet, brick, stone trimmings; cost \$6,000.

Lexington, Ky.—Architect H. L. Rowe reports the building outlook only fair. No agitation on account of labor strikes. For John Hayes, two-story brick store, 34 by 40 feet; cost \$4,500; under way. For R. P. Todhunter, remodeling brick dwelling; cost \$3,500; under way. For J. Headley, two-story brick dwelling, 35 by 55 feet; cost \$5,000; under way. For Mrs. C. E. Hopson, two-story frame dwelling, 40 by 40 feet; cost \$4,500; under way. For Charles Brent, two-story brick dwelling, 40 by 50 feet; cost \$7,000; under way. For Miss Lucy Carter, two-story brick dwelling, 30 by 50 feet; cost \$4,000; under way.

Little Rock, Ark.—A. L. Wassell has commenced work on two brick stores, 40 by 72 feet, on Main between Sixth and Seventh streets.

Mr. S. L. Griffith is about to build a store 25 by 84 feet on Main, between Seventh and Eighth streets; estimated cost \$3,000.

The congregation of the Christian church are to tear down their old church building and rebuild on the same site, on Scott between Third and Fourth streets.

Mr. D. M. Gance has commenced work on his new stores on Markham, between Louisiana and Centre streets.

R. H. Farquhar is to build a residence 40 by 40 feet, on corner of Second and Chester streets; estimated cost \$3,000; T. Harding, architect.

Chas. Whitemon will erect a residence 40 by 40 feet, at corner of Twelfth and Scott streets; estimated cost \$4,000; T. Harding, architect.

Pulaski county jail building is completed, and has been turned over to the county.

A. V. Stafford will build a frame dwelling, 30 by 38 feet; cost \$2,500.

Mrs. De Gursay will erect two frame dwellings.

Logansport, Ind.—Architects Crain & Krusch report: We do not anticipate any trouble here caused by the labor agitation directly. Our manufacturers and railroad officials, and their employes, are on the best of terms, each working for the interest of the other, and the same feeling exists among the building trades. Superintendent Watts, of the P. C. & St. L., is a man of noble character, who rose from a brakeman to his present position, consequently can sympathize with those in his employ. There are a number of good business blocks projected for this place, to be built this season, and we anticipate a good business this year. We have at present a number of small buildings on hand, ranging in cost from \$1,200 to \$2,000.

Manistee, Mich.—The Union School Building and contents were destroyed by fire April 26. Loss, \$45,000. Insurance on building \$21,346, and on the library, furniture, fixtures, etc., \$8,430. The fire was undoubtedly the work of an incendiary. The roller skating rink, the Methodist church basement, and other available quarters are being secured by the school board to accommodate the six hundred scholars and fifteen teachers that have been thrown out by the fire.

Marshalltown, Iowa.—Architect J. G. Weatherby reports: Quite a number of parties who intend building have been awaiting the action of the legislature in regard to locating the Iowa Soldier's Home, expecting it to be located here. Outlook for building is not flattering at present. Of course we feel the effects of the late labor troubles to a certain extent, capitalists holding back from investment until the trouble ceases. Foundations are completed for the double store, Odd Fellows Hall, and office building, 40 by 100 feet, three stories, brick, tin roof; cost \$10,000; contract not let; work will probably be done by the day. Plans on boards for addition to frame dwelling of H. P. Balch.

Milwaukee, Wis.—Architects H. C. Koch & Co. report: There are about seventeen or eighteen architects practicing in this city, all doing more or less, but Messrs. E. T. Mix & Co., and ourselves, have done fully three-fifths of the entire amount of architectural work in the city. The indications last fall and about January 1 were, that our proportion would be even larger this year, and continued so until the labor agitation commenced, which put a complete damper on all building interests. Last year, at this time, we had fully or over \$500,000 worth of new work in hand, but this year we have less than \$100,000, and to all appearances the other architects' proportion of work are the same. Nobody seems willing to build unless there is a very urgent necessity and actual use, or completing contracts of last year, with the exception of a few buildings being erected by some parties that wish to put as pleasant a face to the labor agitation as possible, some out of fear of being boycotted, if we may call it so. At present, the indications are that there will be less than one-quarter of building done this year than what would have been done, had no labor agitation taken place. It is our opinion that in case there is no amicable settlement of labor troubles made, within six weeks from now, the mechanics and laborers will be in a deplorable condition next fall and winter.

Architect C. F. Ringer reports: For Wm. Felte, two-story brick dwelling; cost \$3,000; plans made. For Wm. Frankfurth, remodeling residence; cost \$5,000.

Minneapolis, Minn.—Architects J. T. Moulton & Son, of Chicago, Ill., report: For St. Anthony Elevator Co., grain elevator, 60 by 192 feet, 500,000 bushels storage capacity, also a storage annex in connection with the above, to be 80 by 304 feet, with storage capacity of 1,100,000 bushels; cost of combined buildings and machinery \$200,000; Messrs. Moulton & Son are architects of the building and contractors to furnish materials for the same; ground broken for the foundation; "Don't like the complexion of labor interests; would prefer to be idle just now than to have this contract on hand."

Mason, Mich.—Architect D. P. Clark, of West Bay City, reports: For Dr. O. B. Campbell, two-story brick veneered house, 40 by 42 feet, shingle roof and gables; cost \$3,000; plans in preparation.

Medina, Ohio.—Architect D. P. Clark, of West Bay City, Mich., reports: For John Smart, two-story frame house, 32 by 60 feet, shingle roof; cost \$4,000; plans in preparation. For C. L. Griesinger, two-story frame house, 26 by 40 feet, shingle roof; cost \$2,000; plans in preparation.

Miles City, Montana.—Architects Mendelssohn & Fisher, of Omaha, Neb., report: For H. Orschel, frame residence; cost \$5,000.

Mobile, Ala.—Architect Jas. H. Hutchisson reports: Present condition and outlook good. There are no indications of the advance in prices having any effect on the building trades, and should it be so I think it would be only temporary. All classes of labor are well organized and the public are in sympathy with them. Have the following work in hand for the estate of Jarvis Turner, two-story frame building, 50 by 30 feet; cost \$2,500; and two-story brick, 25 by 40 feet; cost \$3,500; projected; also repairs for T. Harrison.

New Orleans, La.—Architects Adams Bros., of Chattanooga, Tenn., report: For Freedman's Aid Society, four-story brick university building, 156 by 115 feet; cost \$35,000; foundations in; T. R. Coleston, builder.

Niles, Mich.—Architects Wheelock & Rae, of Chicago, Ill., report: Plans; being made for a large hotel to cost about \$50,000.

Nicholasville, Ky.—Architect H. L. Rowe, of Lexington, reports: Brick and stone M. E. church, 40 by 70 feet; cost \$18,000; just completed.

Oberlin, Ohio.—Architects Weary & Kramer, of Akron, report: For Oberlin College, Baldwin cottage two-story, stone; cost \$20,000; under contract; Doerzbach & Decker, builders. For same, brick dormitory building; cost \$45,000; contract not let.

Omaha, Neb.—Architects Mendelssohn & Fisher report: Present condition and outlook not very good on account of labor troubles; we secured the greater part of our work before the trouble commenced; several of our large buildings postponed until next year. Understand other architects here have lost considerable work on account of labor agitation. We have the following work in hand: For Omaha Board of Trade, five-story brick building, 66 by 132 feet, tin roof; cost \$75,000; under way; Withnell Bros., contractors. For A. S. Paddock, five-story brick, 66 by 132 feet, gravel roof; cost \$45,000; under way; main contract not let. For Barker Bros., six-story brick, 45 by 66 feet, tin roof; cost \$40,000; under way; Rochford & Gould, contractors. For Barker Bros., four-story brick, 88 by 60 feet, gravel roof; cost \$35,000; under way; Rochford & Gould, contractors. For C. J. Karlsuch, three-story brick, 132 by 60 feet, gravel roof; cost \$40,000; projected. For Wm. A. Paxton, six-story brick, 132 by 132 feet, gravel roof; cost \$150,000; under way; Withnell Bros., contractors. For H. Frank, three-story brick, 22 by 60 feet, gravel roof; cost \$5,000; under way; Mack Bros., contractors. For F. M. Phillips, two-story brick, 91 by 80 feet, gravel roof; cost \$9,000; under way; A. Johnson, builder. For Standard Cattle Co., feeding barns 270 by 680 feet; cost \$50,000; under way; Shaw & Field, contractors. For C. J. Karlsuch, frame dwelling; cost \$10,000; Ackerman Bros., builders. For M. Goldsmith, block of frame dwellings, 66 by 40 feet; cost \$11,000; projected. For S. T. Josselyn, block of brick dwellings, 44 by 40 feet; cost \$9,000; under way; John Gwinn, builder. For First Congregational Society, stone church building, 60 by 132 feet; cost \$40,000; projected. For S. P. Brady, frame dwelling; cost \$5,000; projected. For H. Ewan, frame dwelling; cost \$5,000; projected. For N. Shelton, block of brick dwellings, 81 by 40 feet; cost \$16,000; projected. For S. H. Clark, block of brick dwellings, 217 by 40 feet; cost \$35,000; projected. For Western Newspaper Union, brick store, 22 by 66 feet; cost \$5,000; projected. For J. H. Hillard, stable; cost \$5,000. For Hake & Palmer, stable; cost \$3,000. For Guy C. Barton, stable; cost \$3,000. Hotel and Exchange Building in South Omaha; cost \$35,000. For P. J. Queally, store building; cost \$8,000. For Ellis Bierbower, brick residence; cost \$9,000. For S. R. Johnson, two frame residences; cost \$8,500. For Mrs. D. J. Detwiler, brick residence; cost \$11,000. For J. H. McConnell, frame residence; cost \$8,000. Seven-eighths of the buildings we report have been ordered since January 1, 1886. Architect P. M. Ellis reports: The labor agitation will effect building interests somewhat, this season. It is generally understood that an advance in all wages will be made. Contractors are disposed to meet the demands of the laborers, and it is not expected that any strikes will take place. Have plans prepared and contracts will be let by May 10 for Brownell Episcopal College building, central portion will be 40 by 100 feet, two wings, 40 by 100 feet, four stories and sub-basement, pressed brick, with moulded brick and cutstone trimmings, slate roof, steam heat throughout; cost about \$65,000. For Orchard Hill Building Association, ten frame cottages, cost \$1,400 each. For J. W. Griffith, assistant auditor U. P. R. R., Queen Anne frame residence; cost \$10,000. Have also plans made for a block of eight brick residences, for an eastern capitalist; cost \$3,000 each.

Ottumwa, Iowa.—Architect Edward Clark reports several small buildings, ranging in price from \$900 to \$2,600, and aggregating \$6,400.

Portland, Oregon.—Outlook better than for two years past; uneasiness created by anti-Chinese excitement almost if not quite dead. Alexander Mayers, three-story brick store, 25 by 100 feet, First and Washington; up to third story; \$18,000. Henry Failing will build three-story brick block, 100 by 100 feet; First and Oak; about \$60,000. Plans invited April 14 for church for First Presbyterian Society, corner Tenth and Alder, to cost not less than \$50,000; to be built during 1886. O'Shea Bros., Eighteenth and F., two eight-room frame dwellings; \$8,000 each; under roof. Mrs. J. B. Waldo, two-story brick block, 75 by 100 feet, corner Second and Washington; foundation in, to be completed August 1; \$23,000. D. S. Tuthill, residence, Eighteenth and D.; receiving finishing touches; \$14,000. A. H. Johnson, wharf, 80 by 400 feet, east bank Willamette river, between J. and L. streets; \$18,000.

Pensacola, Fla.—Architect W. W. Myers reports: Catholic parsonage, two-story brick veneer building, 40 by 65 feet, slate roof; cost \$4,000; open for bids. For J. A. Gates, one-story and attic frame dwelling, 46 by 90 feet; cost \$4,000; projected. Also several small buildings ranging in cost from \$700 to \$1,500 each.

Petersburg, Ill.—Architect Geo. H. Helmle, of Springfield, reports: For Jacob Hofing, ten-room frame dwelling; cost \$3,500; under way.

Richmond, Ind.—Architect John H. Hascoster reports: For Henry Cutter, four two-story brick five-room dwellings; cost \$1,800; projected.

Sioux City, Ia.—Architect Clinton J. Warren, of Chicago, Ill., reports: Remodeling and alterations in the Hubbard house, two stories will be added, lobby on first floor, entrance from each street, new elevators, etc.; making complete cost of \$100,000. For Jas. Booge, brick and stone residence, steam heat, slate roof; cost \$20,000.

Architect G. G. Baldwin reports: The outlook for building was very good, but the formation of unions among the contractors and trades, and the fear of strikes, has, in my opinion, checked building in this city; also the rather sudden advance in real estate has had the same effect. For E. H. Stone, two-story frame residence, 32 by 42 feet; cost \$5,000; projected. Have several smaller buildings projected and under way, ranging in cost from \$1,600 to \$2,200.

San Antonio, Tex.—Architect and builder E. J. Gallagher reports: In this place there is a better class of buildings going up. Brick is handled from Seredo, 150 miles, and sold at \$10.50 per thousand.

Architect and builder James Murphy reports: For Thad. W. Smith, two-story and cellar brick and terra-cotta building, 40 by 90 feet; cost \$23,000.

Architect Eidlitz, of New York City, reports: For Major-Gen. Brackenridge, three-story fireproof bank building, 30 by 110 feet, pitched-face ashlar, water table richly molded; cost \$75,000; completing second story; day work. The County and City Hospital building, about 200 feet square, two-story and cellar, built of local rock; cost \$60,000 when completed and furnished; Wiggitt & Witt, builders.

There are a few transient men here trying to organize a Knights of Labor branch. We are to have a new club room and opera house, for which a St. Louis architect is preparing plans.

A company has been organized to start a sanitarium on the hills northwest of the city. The hotel will cost \$150,000. Col. Belknap, president of the Street Railway Co., is interested to the extent of \$50,000.

Sidney, Neb.—Architects Mendelssohn & Fisher, of Omaha, report: For S. C. Morgan, frame cottage; cost \$2,500.

South Chicago, Ill.—Architect Fred. Ahlschlager, of Chicago, reports: For German Lutheran Society, pressed brick and frame church building, 42 by 75 feet; cost \$10,000.

South Bend, Ind.—Architects N. Weaver & Son, of Elkhart, report: For Dr. D. E. Cummins, two-story and basement office building, 25 by 66 feet, brick and stone, slate roof, galvanized iron cornices; cost \$7,000; projected; contract not let.

Springfield, Ill.—Architect Geo. H. Helmle reports: For Board of Education, miscellaneous repairs and improvements on school houses; cost \$6,000; projected. For Herman Pierik, remodeling store building; cost \$4,000; projected. For Henry Becker, three five-room cottages; cost \$3,000; projected. For Lewis H. Miner, two-story frame dwelling, 30 by 32 feet; cost \$2,500. For Thomas Aurelius, five-room frame cottage; cost \$1,600; under way.

Architect Geo. H. Helmle reports: The indications are that labor agitation will not have any influence on building operations in this vicinity. For P. Drury, three-story brick and stone store building, 40 by 64 feet; cost \$7,000; projected; N. Ritter, builder. For D. L. Wing, remodeling residence; cost \$4,000; under way; E. F. Gehlman, builder. For J. C. Collins, two-story Queen Anne dwelling, 30 by 48 feet, eight rooms; cost \$3,000; projected. For J. H. C. Schoettler, two-story frame dwelling, 34 by 50 feet, 8 rooms; cost \$3,500; projected.

St. Louis, Mo.—Architects Ramsey & Swasey report: Condition of building rather dull. At present matters are very unsettled among mechanics. For S. Comstock, two-story residence, 50 by 65 feet; style, Eastlake, first story brick, balance of slate; cost \$15,000; drawings being made, to be sub-let. For Ellis Wainwright, stable, 25 by 40 feet, brick and red slate; cost \$3,000; drawings being made, to be sub-let. For same, three-story and basement residence, 27 by 90 feet, Massachusetts brownstone and St. Louis pressed brick, steam heating; cost \$20,000; under way; contracts sub-let.

Architect A. F. Rosenheim reports: So far as I am personally concerned the outlook for this season is very favorable. But people generally are slow about making up their minds on account of impending labor troubles. For M. Rosenheim, two-story and attic and basement brick residence, 30 by 60 feet, brownstone basement and trimmings, high red slate roof, stained glass, steam heating and all modern improvements; projected; contract not let. For Mrs. Frank A. Lane, remodeling dwelling, 40 by 80 feet, consisting of a new L building, 30 by 40 feet, two-story and basement, and a third story over the entire new and old portions; cost \$9,500; projected; contract not let. For I. M. Wiener, two-story and basement and attic residence, 25 by 75 feet; stock brick and Lake Superior redstone; cost \$6,500; projected; contract not let. For Dr. G. J. Engelmann, two-story office, 15 by 30 feet, stock brick, terra-cotta and red sandstone; cost \$5,000; under way; B. Webber & Co., builders.

Architect Thomas Brady reports: Present condition and outlook good. For D. B. Brennan, three ten-room stone-front dwellings, 22 feet 6 inches by 65 feet 6 inches each; cost \$16,500; building the cellars; contracts let separately; M. Connolly, carpenter. For E. McGrade, two ten-room stone-front dwellings, 21 feet 6 inches by 64 feet 6 inches; estimated cost \$5,200 each; taking bids. For Thos. Gallagher, block of eight stores and dwellings, 165 by 50 feet, stone front, slate and gravel roof; cost \$25,000; excavation commenced; contracts to be let separately; M. Connolly, carpenter.

Following are the permits for buildings costing \$4,000 and over, issued since our last report: Wm. Boehm, two two-story brick dwellings, 34 by 57 feet; cost \$4,300; P. Tuernann, builder. J. J. Sutter, two two-story brick dwellings, 62 by 81 feet; cost \$14,000; J. Helen, builder. Miss Dubie, two-story brick dwelling, 24 by 36 feet; cost \$4,000; E. T. Hoffman, builder. F. S. Meyers, addition to three-story brick dwelling, 22 by 45 feet; cost \$5,000; K. Burden, builder. Mrs. W. Patterson, two-story brick dwelling, 22 by 69 feet; cost \$5,500; P. Fugerty, builder. P. Fugerty, six two-story brick dwellings, 102 by 52 feet; cost \$15,000; the owner is the builder. E. Hall, five two-story brick dwellings, 86 by 51 feet; cost \$10,000; Francisco & Farnum, builders. Mrs. Hartter, two-story brick dwelling, 27 by 61 feet; cost \$4,500; W. C. Popp, builder. J. Hall, two two-story brick dwellings, 37 by 50 feet; cost \$5,000; Chapman & Hussey, builders. A. Grate, four two-story brick dwellings, 70 by 70 feet; cost \$10,000; H. Schuldmann, builder. J. Miller, two-story brick store and dwelling, 30 by 80 feet; cost \$4,000; J. Schoffen, builder. H. Bauer, four two-story brick buildings, 60 by 32 feet; cost \$4,200; H. Poertner, builder. Camerson Co., two-story frame planing mill, 100 by 100 feet; cost \$5,000; R. J. Hoffmann, builder. M. Backer, four two-story and mansard brick dwellings, 72 by 32 feet; cost \$4,300; A. Vasse, builder. H. W. Peters, three two-story brick stores and dwellings, 50 by 50 feet; cost \$5,000. P. Monohan, ten three-story brick dwellings, 162 by 47 feet; cost \$22,000; M. Laine, builder. Mrs. C. Nolan, two-story brick dwelling, 22 by 65 feet; cost \$4,000; Hush & Clifford, builders. C. Schoenbeck, two two-story brick dwellings, 32 by 50 feet; cost \$4,400; Biermann & Ahning, builders. J. F. Dayen, two-story brick store and dwelling, 23 by 60 feet; cost \$5,000; P. Roach, builder. St. Louis National Bank, one-story brick, iron and stone bank building, 30 by 110 feet; cost \$35,000; C. E. Clark, builder. J. Murphy, three two-story brick stores and dwellings, 60 by 46 feet; cost \$7,000; Goesse & Remmers, builders. P. Grinner, two three-story brick dwellings, 50 by 75 feet; cost \$15,000. H. Leidner & Son, two-story brick livery stable, 50 by 140 feet; cost \$10,000; Biermann & Ahning, builders. M. A. Rosenblatt, three-story brick office building, 47 by 32 feet; cost \$10,000; sub let. T. Salorgue, Jr., four-story brick livery stable, 42 by 96 feet; cost \$5,000; B. Weber & Co., builders. P. Monohan, four two-story brick dwellings, 64 by 41 feet; cost \$4,000; M. Laine, builder. Wm. Rinne, repairs to brick dwelling, 60 by 92 feet; cost \$4,000; C. H. Poertner, contractor. Mrs. Johnson, two-story brick dwelling, 27 by 43 feet; cost \$4,200; J. B. Lindsly & Son, builders. Mrs. H. Meyer, two-story brick dwelling, 20 by 53 feet; cost \$4,300; A. Uri & Son, builders. P. Ready, two-story brick dwelling, 53 by 50 feet; cost \$6,500; J. Flanery & Co., builders. Wm. E. Winter, three-story brick dwelling, 22 by 67 feet; cost \$6,000; A. E. Cook, builder. H. Hartmann, two-story and mansard brick dwelling, 22 by 57 feet; cost \$5,000; A. Uri & Son, builders. D. Schultz, two two-story brick dwellings, 66 by 50 feet; cost \$8,000; E. E. Squires, builder. Collier estate, alterations to brick building, 31 by 150 feet; cost \$4,000; sub let. G. Dammer, three two-story brick dwellings, 50 by 58 feet; cost \$7,000; F. Mathers, builder. T. Gay, two-story brick dwelling, 21 by 68 feet; cost \$6,250; Francisco & Farnum, builders. R. Schean, two two-story brick dwellings, 42 by 60 feet; cost \$6,800; H. C. Brinkmeyer, builder. G. Partridge, addition to two-story brick dwelling, 25 by 32 feet; cost \$4,000; A. D. Cook, builder. R. A. Pendleton, two-story brick dwelling, 23 by 43 feet; cost \$4,500; M. B. Scanlon, builder. C. W. Wetengel, two two-story brick dwellings, 32 by 52 feet; cost \$4,000; F. C. Schmitz & Sons, builders. Simmons & Loler, two-story billiard hall, 52 by 126 feet; cost \$25,000; B. R. Swigleton, builder. R. S. Brooking, brick and stone store and office building, 65 by 137 feet; cost \$40,000; A. E. Cook, builder. F. Weber, three-story brick store and dwelling, 25 by 60 feet; cost \$5,000; O. Brew, builder. H. Vogelsang, three-story brick store and dwelling, 40 by 72 feet; cost \$8,600; J. K. Keefe, builder. J. F. Hackmann, two-story brick dwelling, 22 by 75 feet; cost \$5,000; J. F. Hackmann, builder. W. C. Wall, two two-story brick dwellings, 35 by 59 feet; cost \$7,000; J. T. Wells, builder. M. E. Church congregation, one-story

brick church, 50 by 50 feet; cost \$4,700; Barnett & Duffner, builders. P. Grifen, two two-story brick dwellings, 41 by 55 feet; cost \$7,400; H. Hutmann, builder. J. Koebbe, two-story brick store and dwelling, 20 by 70 feet; cost \$4,000; B. Koesters, builder. P. G. Gerhardt, seven two-story brick dwellings, 19 by 60 feet; cost \$12,000; E. H. Hoffmann, builder. R. Kahmann, three two-story brick dwellings, 41 by 46 feet; cost \$4,400; A. Fenner, builder. J. L. Claus, two two-story brick dwellings, 30 by 55 feet; cost \$4,000; C. H. Mason, builder. F. H. McMahon, three two-story brick dwellings, 50 by 60 feet; cost \$8,000; McClure, builder. Mrs. J. Gorman, two-story brick dwelling, 22 by 62 feet; cost \$4,900; M. B. Scanlon, builder.

St. Augustine, Fla.—The Ponce de Leon hotel, now being rapidly constructed, will be 800 feet long, and is to cost over \$1,000,000. It is said that when completed it will be the most complete and beautiful hotel structure in the country. The walls are made of a concrete of coquina and sand, which forms an artificial stone that is fire-proof, rat-proof, damp-proof, and vermin-proof. The proportions are generally low, the structure being spread out, four stories in height, with bright red overhanging tile roof. The whole edifice has a thousand things upon which to catch a fancy. There are balconies, loggias, and curious roofs. One of the many features suggestive of the East is the garden on the roof of the main edifice. A trellis-work covered with vines will shade this promenade, which is situated seventy feet above the level of the ground, and which makes a beautiful connection between the rotunda and the two towers. The building proper is around a court 150 feet square, the main portion being in the rear, with its central dome at each end, the two wings, east and west, forming the sides of the court, while along the front an ornate arcade unites the two wings, thus making complete the inclosure. This rotunda is 54 feet by 80 feet, and is four stories high. In the center is a row of columns supporting the balconies on the four stories. These will be finished in oak. The parlor, instead of being one large, inhospitable room, is divided into sections by the supports of the floors above. The dome is to be frescoed to represent a subject connected with the history of St. Augustine.

Sutton, Neb.—Architects Coddington & Hogg, of Kansas City, Mo., report: For school district No. 2, two-story eight-room school house, 66 by 72 feet; cost \$15,000; plans in preparation; open for bids May 10.

Tallahassee, Ala.—Architects Bruce & Morgan, of Atlanta, Ga., report: For Dr. B. W. Toole, two-story frame residence; cost \$4,000; taking bids.

Terre Haute, Ind.—Architect J. W. McClain reports: For Michael Burk, double dwelling, fourteen rooms; cost \$3,000. For F. C. Fisbeck, frame dwelling, eight rooms; cost \$3,000. For B. F. Havens, remodeling frame dwelling; cost \$2,500. For Mrs. C. Conover, remodeling frame dwelling; cost \$1,300. For H. F. Schmidt, remodeling frame dwelling.

Tyler, Tex.—Architect J. O. Scott reports: For R. H. Brown, frame dwelling; cost \$4,000; under way; H. C. Bradbury, builder. For M. A. Long, frame dwelling; cost \$3,800; M. P. Parker, builder. For Smith county, Texas, repairing jail; cost \$3,600; under way; M. T. Brown, contractor. The United States government has made an appropriation of \$62,000 to build a court house and post-office at this place, and have good reason to believe it will start soon. The prospect for building is better than it has been for four or five years.

Victoria, Tex.—Architect Eugene T. Heiner, of Houston, reports: For J. M. Brownson, two-story frame residence, 55 by 78 feet, slate roof; cost \$12,000; under way, being done by separate contracts, and partly by day work.

Waseca, Minn.—Architects, C. G. Maybury & Son, of Winona, Minn., report: For Laird-Norton Co., two-story brick store, 22 by 140 feet; cost \$6,000; projected.

West Point, Ga.—Architects Bruce & Morgan, of Atlanta, are advertising for bids on the new school house to be erected here. It will be a two-story, eight-room, frame building, all modern conveniences; cost \$10,000.

Winona, Minn.—Present condition and outlook for building is good. The Knights of Labor number over 2,500 in this city; but no trouble is anticipated, though two or three parties who talked building, claim to have abandoned the idea at present for that reason. All the saw mills are running but ten hours per day, against eleven last year, and pay the same wages, paying weekly instead of monthly.

A committee, appointed by the Board of Trade, consisting of several of the prominent business men of the city, are advertising to give a handsome bonus to the party who will build a \$100,000 hotel in this city, as the city has nearly 20,000 inhabitants and has not a first-class hotel.

Architects C. G. Maybury & Son report: For F. McDonough, two-story brick store, 30 by 55 feet; cost \$3,000; projected. For V. Simpson, four two-story brick cottages, 30 by 50 feet; cost \$2,000 each; projected. For J. Keenan, two-story brick store, 27 by 60 feet; cost \$3,000; projected. For C. C. Beck, three-story brick store building, 40 by 130 feet; cost \$12,000; under way. For C. Stark, two-story brick store building, 20 by 80 feet; cost \$3,500; under way. Also considerable work out of the city, reported elsewhere in this issue.

Worthington, Ind.—Architect J. W. McClain, of Terre Haute, reports: For S. D. Harrah, frame dwelling; cost \$2,000. For Oswald D. Bell, brick residence, nine rooms; cost \$4,000.

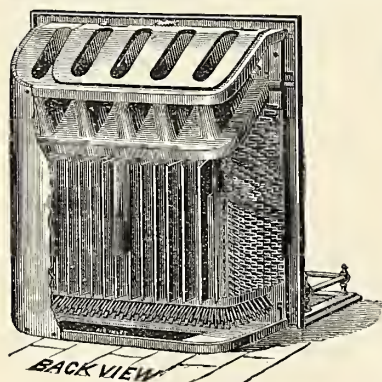
West Toronto Junction, Ont.—Architect D. S. Pentecost, of Chicago, Ill., reports: For Messrs. Heintzman & Co., of Toronto, four-story factory building, 100 by 140 feet, first floor will be arranged and fitted for offices and show rooms, two elevators will be placed; total cost \$17,500; plans finished; contract about to be let. Also, fifteen cottages for the same firm, to be used by workmen in factory. For Mrs. J. Waters, two-story and basement boarding house, 50 by 110 feet; cost \$8,000.

Woodlawn, Ill.—Architect Ira C. Saxe, of Chicago, reports: For the Woodlawn Club, a two-story and French roof club-house, 50 by 80 feet, pressed brick, terracotta trimmings; cost \$10,000; ready for bids.

West Bay City, Mich.—Architect D. P. Clark reports: Very quiet in the Saginaw Valley. In our opinion, however, the labor agitation will have no effect whatever on building interests or general business, more than indirectly caused by outside effects. Have plans in preparation for several buildings, to be erected in various localities.

Wooster, Ohio.—Architects Weary & Kramer, of Akron, report: For Trustees' M. E. Church, combination brick church and sabbath school building; cost \$22,000; contract not let.

Zanesville, Ohio.—Architect H. C. Lindsay, reports: For Miss Hattie James, frame cottage, 28 by 42 feet; cost \$2,500; under way; Oweings & Son, builders. For J. H. Dodd, double brick dwelling, 36 by 58 feet; cost \$4,200; under way; Geo. E. Jenkins, builder. For Ed. Dillon, two-story cottage; cost \$3,300 under way; Edward Winchel, builder. For Dr. Davis, brick residence and office; cost \$4,000; under way; W. S. Frazier, builder. Also several cottages, to cost from \$600 to \$1,000. A parsonage at High Hill, Ohio; cost \$2,000; M. A. Brown, builder.



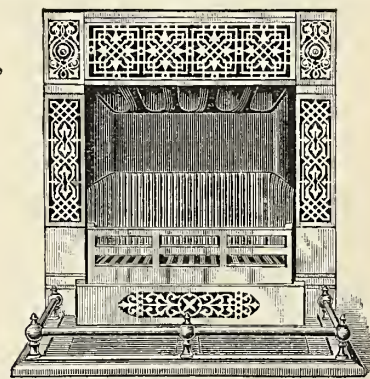
EDWIN A. JACKSON & BRO.,

77 BEEKMAN ST., NEW YORK.

Heat-Saving and Ventilating
GRATE.

SOME WISCONSIN REPORTS.

(See Back Numbers for Illinois and Michigan Reports.)



The ventilating Grate works splendidly. It warms and ventilates our sitting-room, 18'x 15' x 11 feet, and a bedroom above, 12' x 12' x 10 feet.

CHARLES CHURCHILL,
Clerk Circuit Court, Waupaca.

We have had exceedingly cold weather, but are very well pleased with the working of the grate. The atmosphere in the office is as pure as out-door air.

ANSON EDRIDGE & SON, Fort Howard.

One of our office rooms is 22 x 35 feet, and not until the recent cold weather (30° below zero) were we obliged to call in the assistance of steam heat. The fresh-air supply is especially pleasant.

THE ESTERLEY HARVESTING MACHINE CO., Whitewater.

I regard it as the best, both as a heater and ventilator.

EDWIN REYNOLDS, E. P. Alles & Co's Iron Works, Milwaukee.

The Ventilating Grate is in our sitting-room, 18 x 24 x 14 feet. I have kept house for forty years, but have never known such solid comfort, as far as heat and ventilation are concerned, as we have had since using your grate. In moderate weather we heat and ventilate four rooms below and three rooms above.

S. B. AMORY,

Fond du Lac.

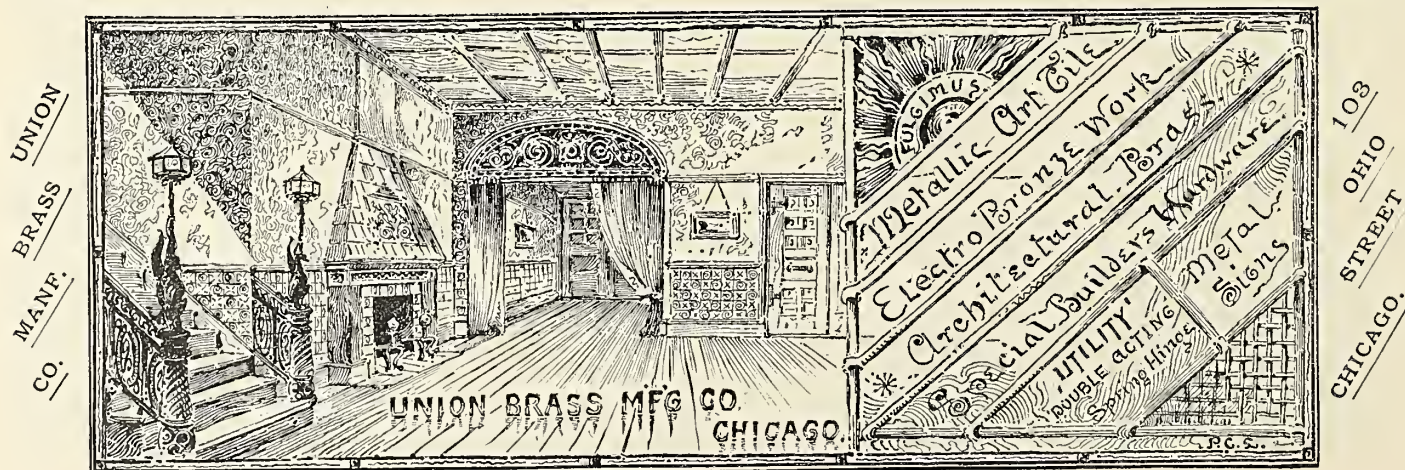
The grates in my library, also in hall, both of which convey heat above, give excellent satisfaction. They are also elegant in their finish and style.

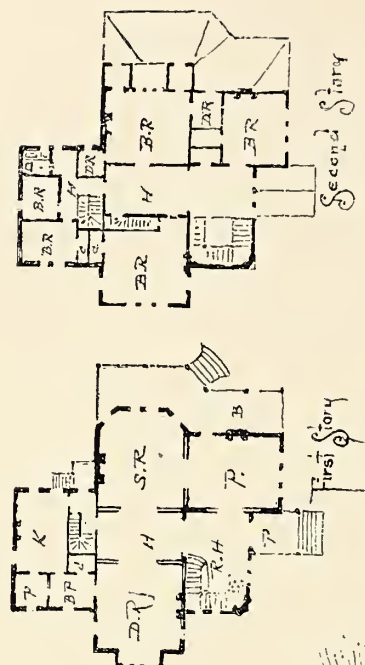
F. N. FINNEY,

Gen'l Manager Wisconsin Central Ry., Milwaukee.

Send for Catalogues and Reports from your own state and neighborhood.

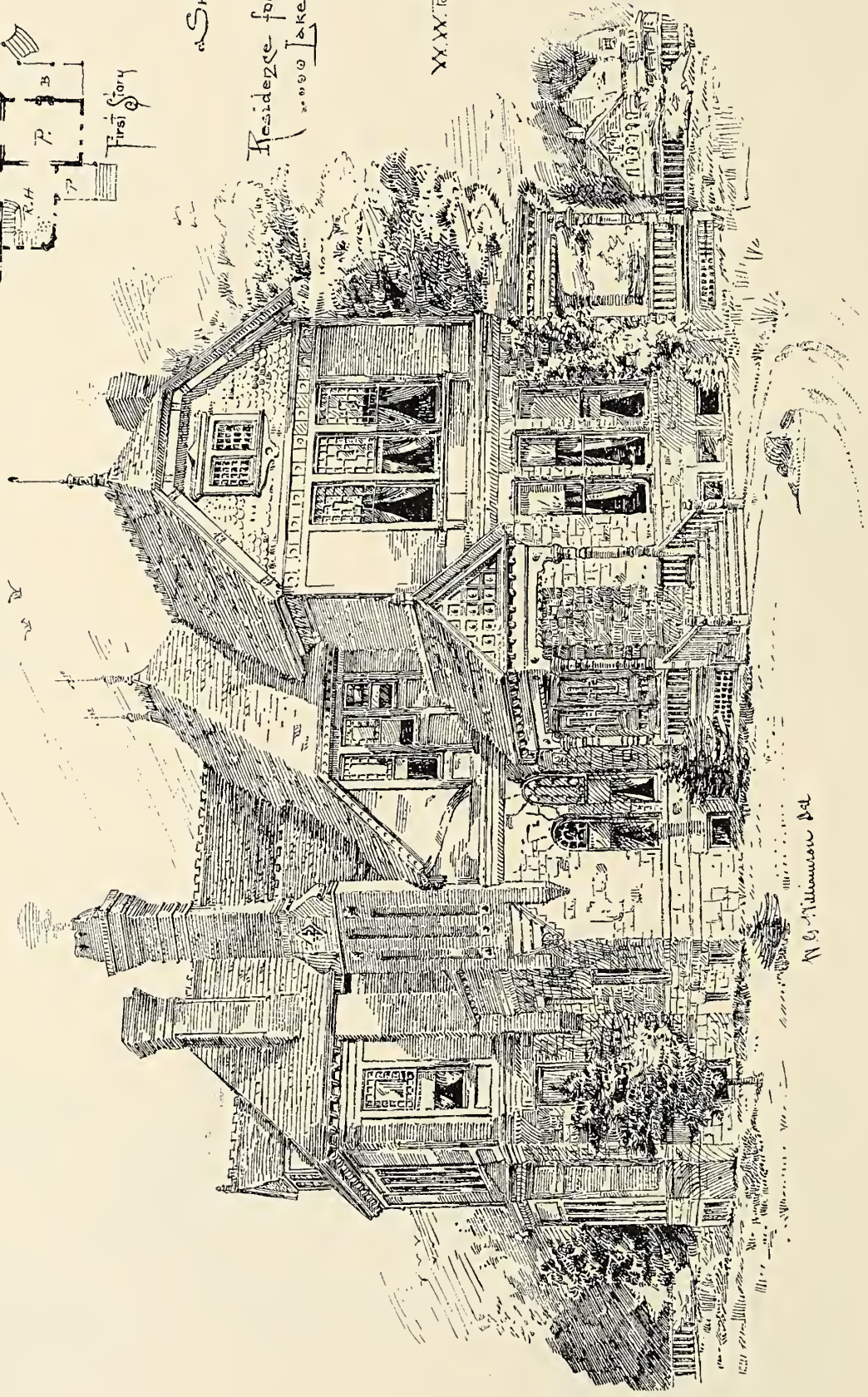
THE HENRY DIBBLEE CO., Chicago Agents.
266 AND 268 WABASH AVENUE.





A SKETCH
of
Residence for Chas. Terry Esq.
Lake Forest Ill.

W. W. Boyington Archt.
Chicago



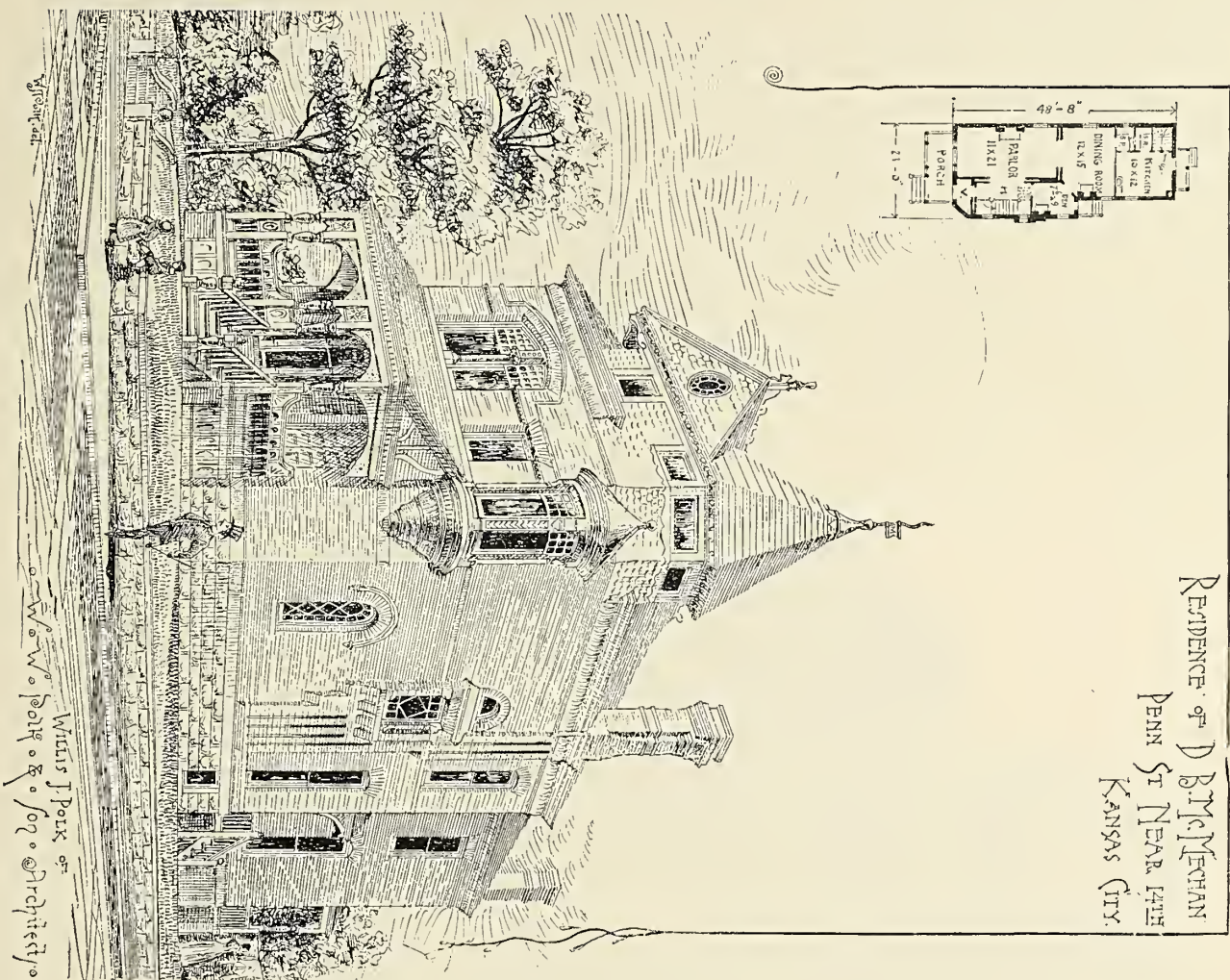
W. G. Williamson Del.



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Inland Architect and Builder Print.

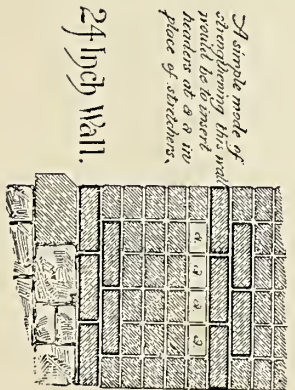
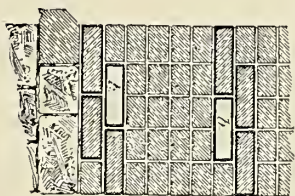
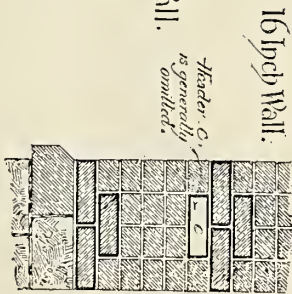
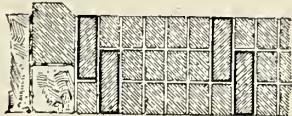
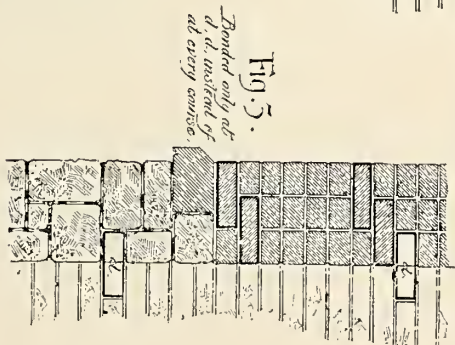
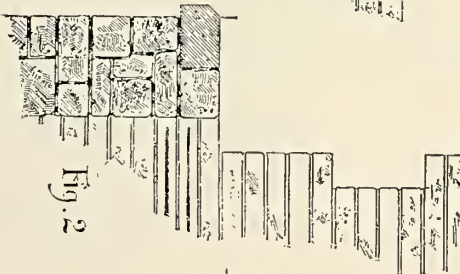
COMPETITIVE DESIGN FOR GRANT MEMORIAL AT LINCOLN PARK, CHICAGO,
By S. S. BEMAN, Architect.

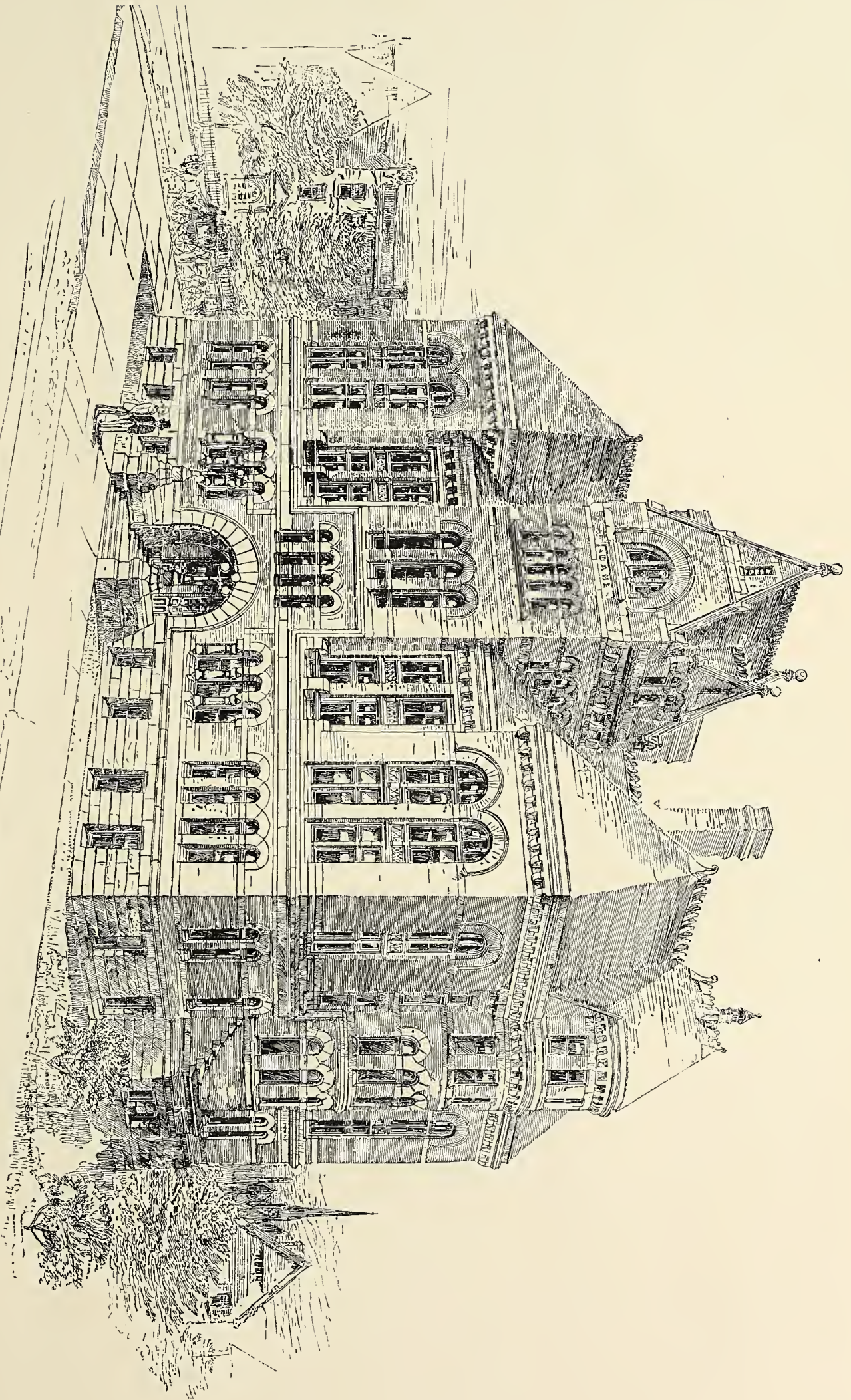


Diagrams illustrating paper on Brickwork

by
George Brammough
of Drabody Street,
Chicago.

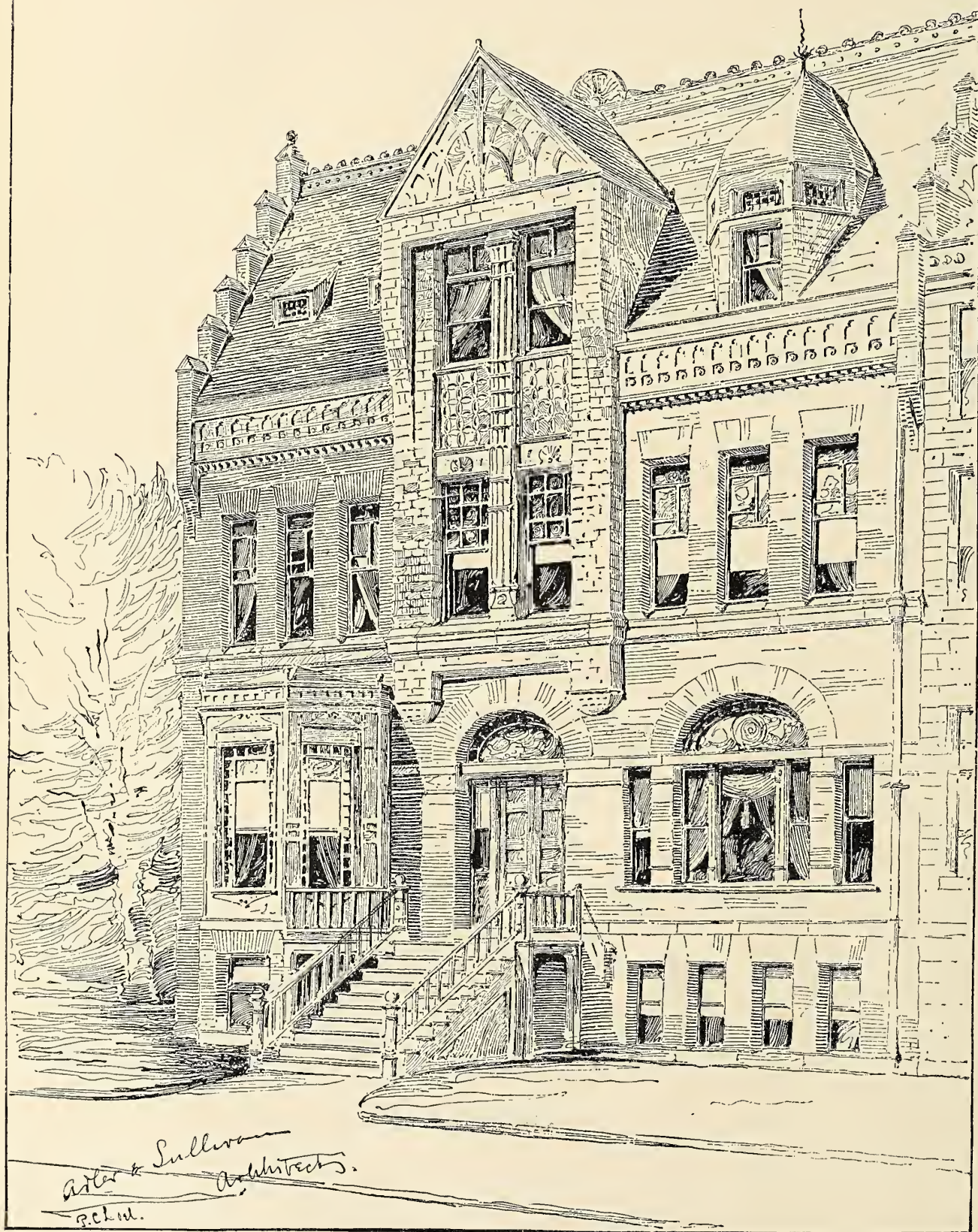
Showing bond used in Chicago.





DANE CO. COURT HOUSE, MADISON WIS.
H.C. Koch & Co. Architects.

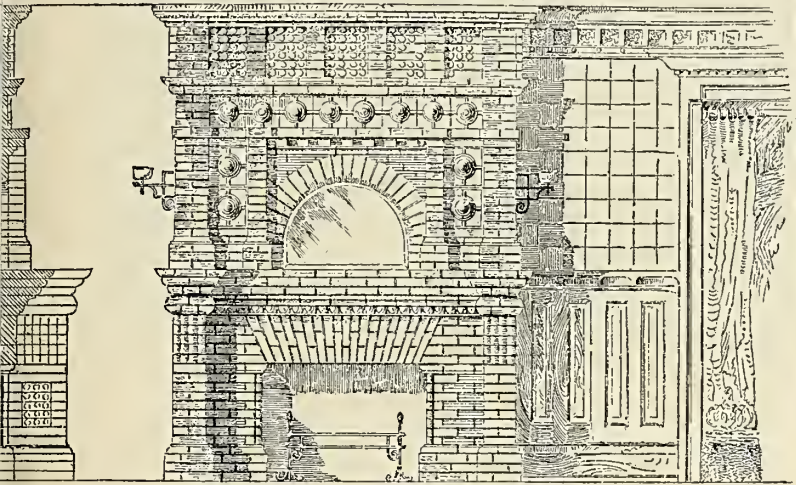
West Chicago Club House
48 & 50 Throop Street Chicago
Adler & Sullivan Architects



Adler & Sullivan
Architects.
P. Chas.

COMPETITIVE DESIGN.

Fig. 9 BRICK MANTEL
Anderson Pressed Brick Co Chicago Ill



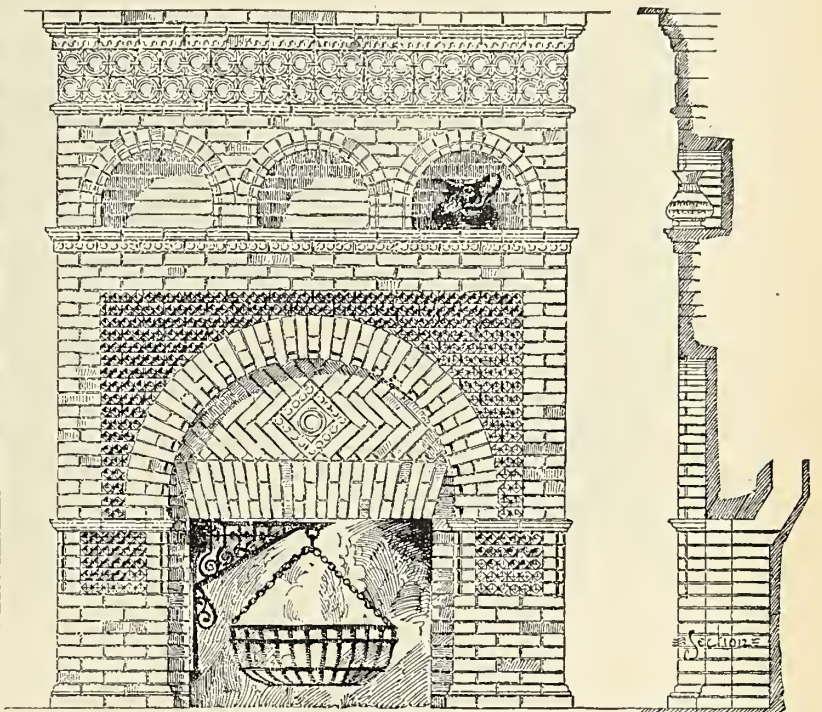
tion through center of Mantel



Plan

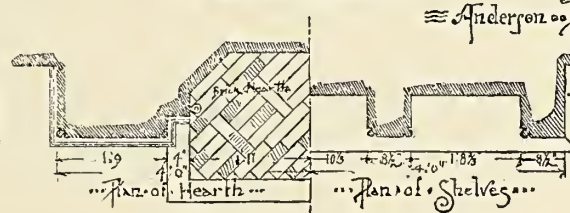
Scale

Submitted by
O. Thumpack
Member of Chicago Architectural Sketch Club.
(Oscar Enders)



... Elevation ...

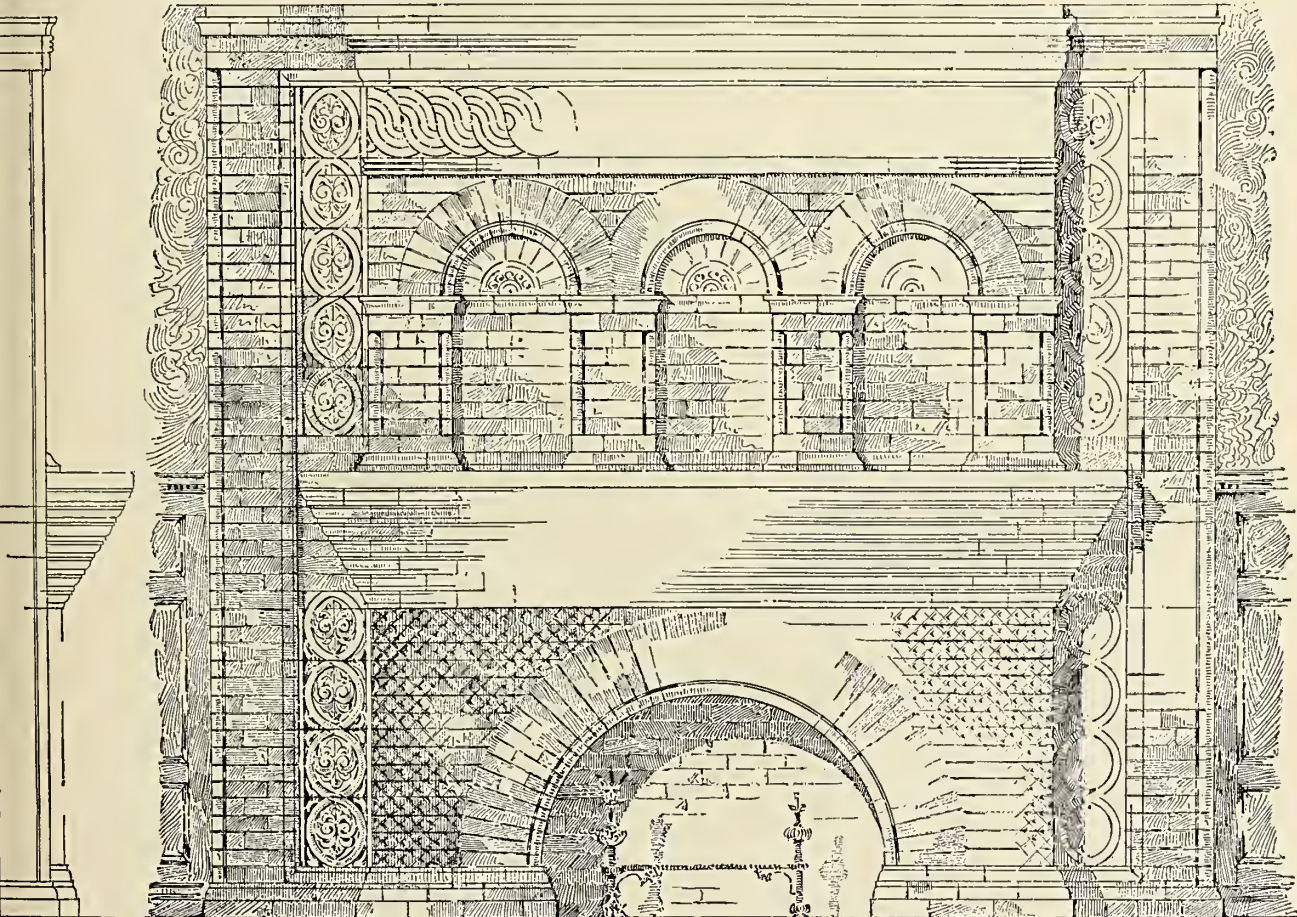
Anderson Pressed Brick Co
Mantel Competition



Plan of Hearth

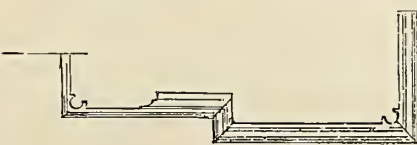
Plan of Shelves

Chicago Architectural Sketch Club
Design by Catalogue
Second Prize
W. F. Williamson



le Elevation

Front Elevation

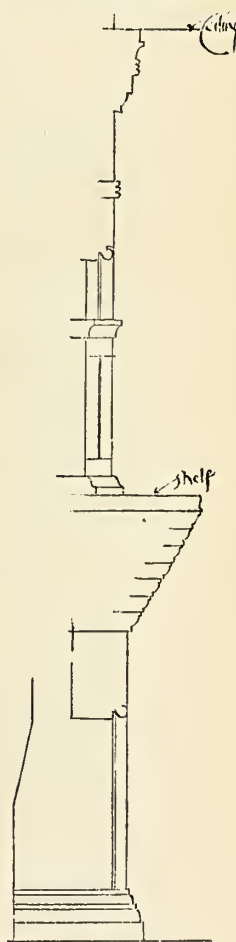


1/2 Plan

Scale 1 inch = 1 foot.

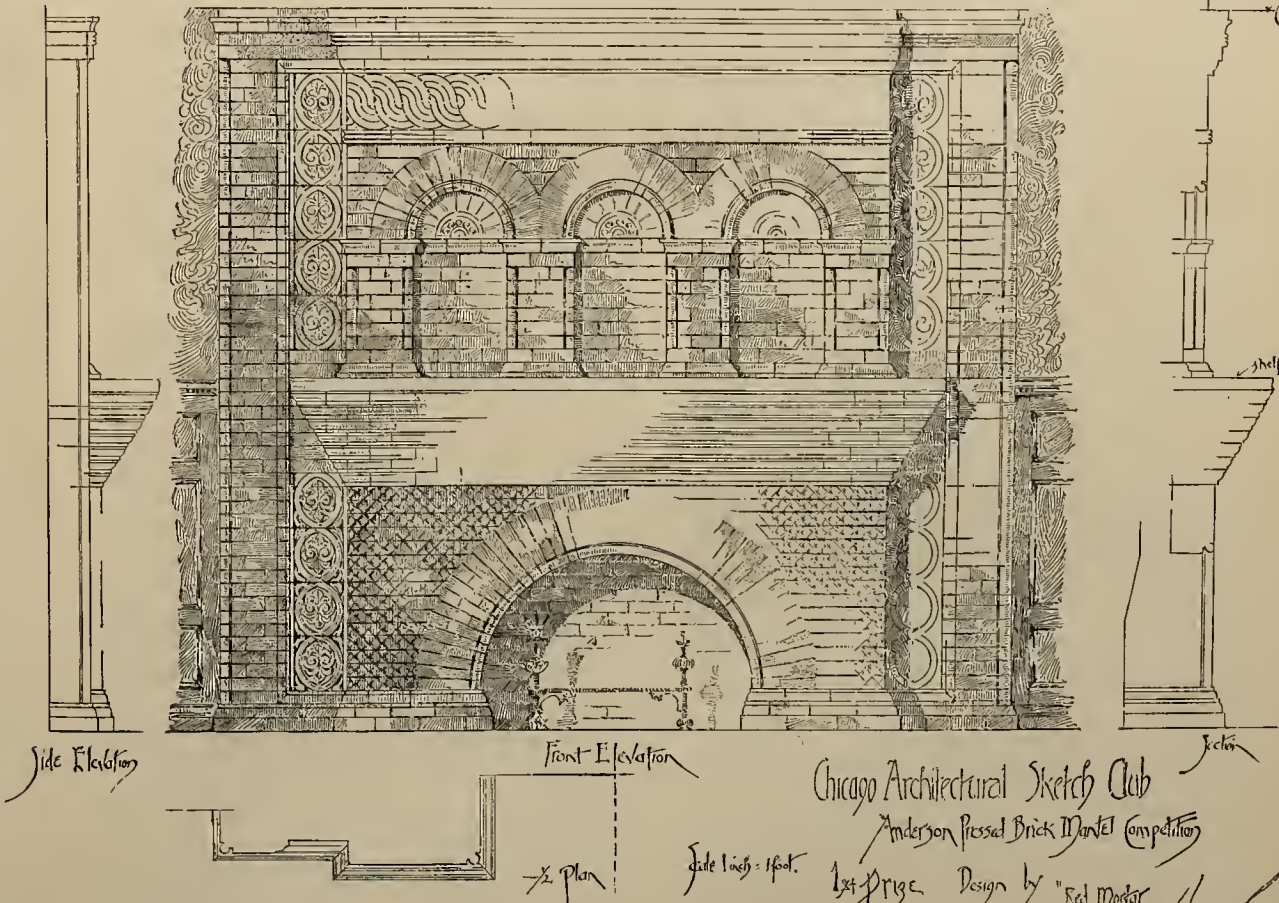
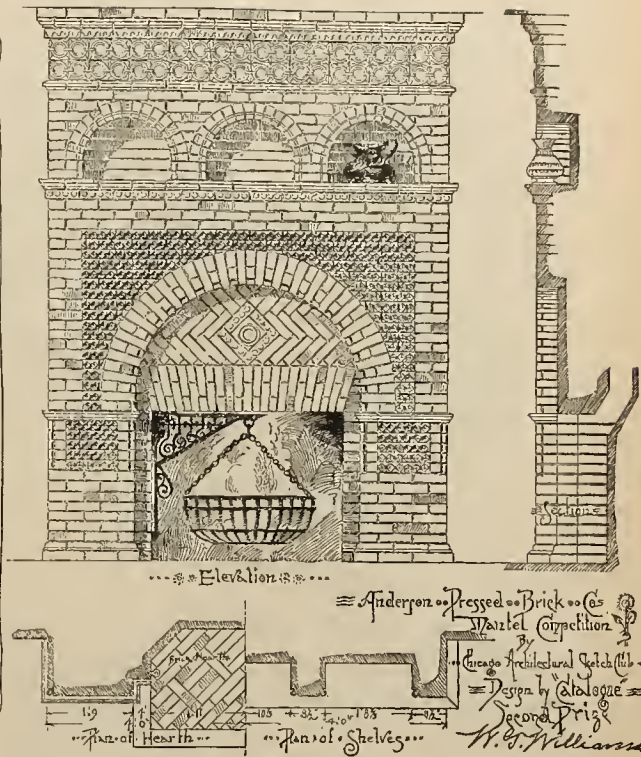
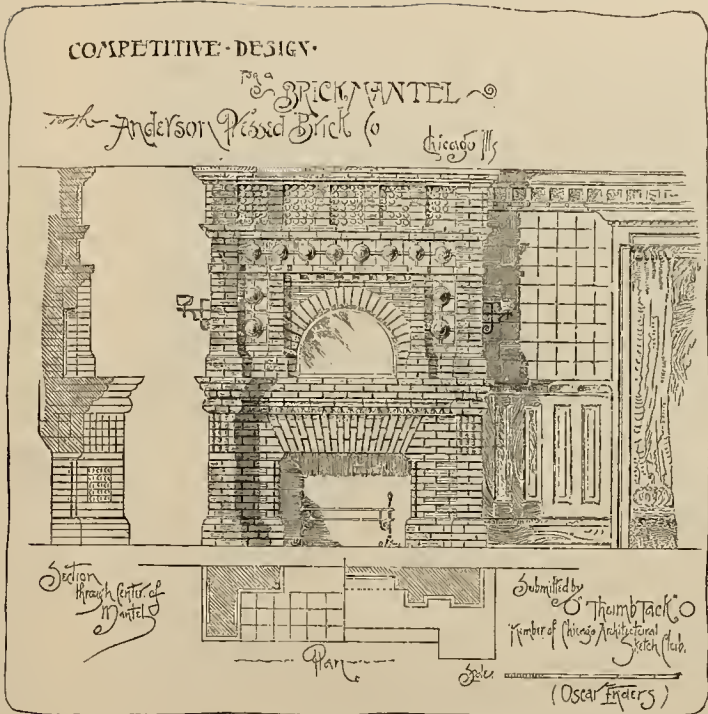
Chicago Architectural Sketch Club
Anderson Pressed Brick Mantel Competition

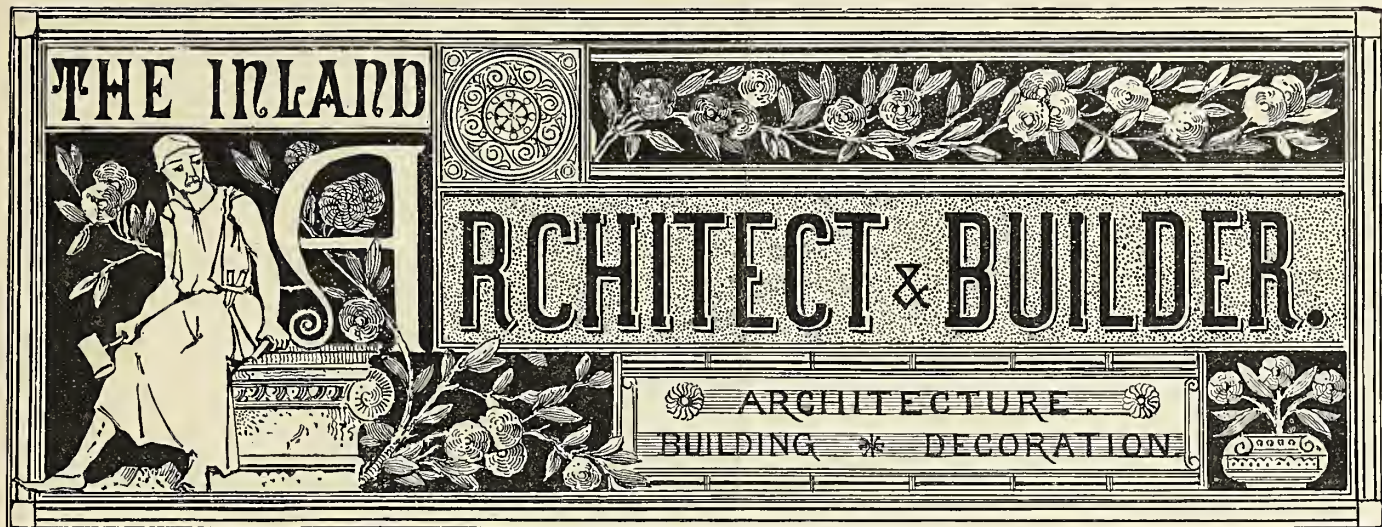
1st Prize Design by "Red Mortar" Harry Lawrence



Section

West Chicago Club House
48 & 50 Throop Street Chicago
Adler & Sullivan Architects





Entered at the Postoffice at Chicago as second-class matter.

A MONTHLY JOURNAL
(WITH AN INTERMEDIATE NEWS NUMBER)
DEVOTED TO WESTERN INTERESTS.

OFFICIAL ORGAN OF THE
WESTERN ASSOCIATION OF ARCHITECTS.
(A NATIONAL ORGANIZATION.)

VOL. VII.—No. 8.

CHICAGO, MAY, 1886.

TERMS: { \$3.00 a year in advance.
Regular number, 25 cts. a month.
Intermediate number 10 cts.

INTERMEDIATE NEWS NUMBER,

DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

PUBLISHED BY

THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

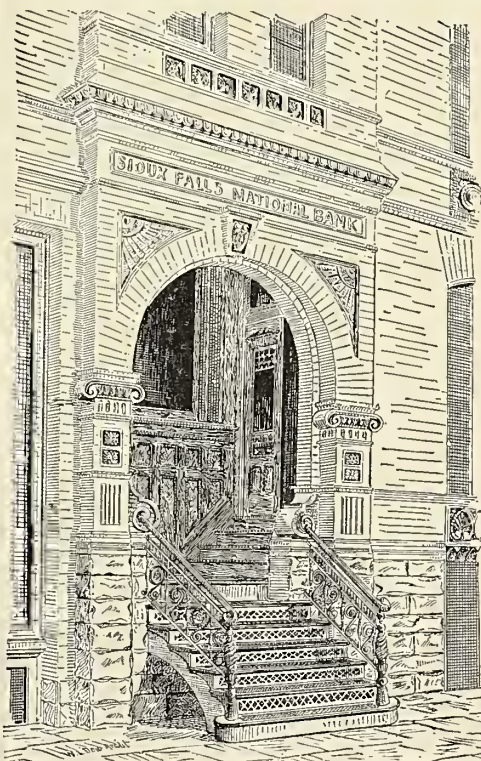
THE next meeting of the the Illinois State Association of Architects will be of supreme importance, as it will consider finally the law now under revision governing state sanitation. It should be adopted by a full meeting of Illinois architects, as it merits the support of both architects and the public in its presentation to the state legislature for passage.

AFTER nineteen years of agitation, the eight-hour movement is pronounced a failure, not only by those who have carefully and impartially watched its movements, but among those who formerly were its most enthusiastic advocates. It has been fought out systematically, squarely, at the loss, as we predicted five months ago, of almost the entire work of what promised to be one of the most prosperous years this country has seen. And this defeat is not owing to local or incidental conditions, or even to the avarice of the workmen who demanded with it a ridiculous increase of wages, but to the fact that the entire industrial growth has been built up on a ten-hour basis, and to drop at once to eight hours is much like trying to put broad-gauge rolling stock upon a narrow-gauge track. This, together with the refusal of the agitators of the movement to recognize that it and the rate of wages were regulated by the now universal influence of supply and demand both in labor and production, are the prime causes of failure. During the late agitation, the number of those advocating eight hours have received but little increase, the additions being from those, who, hoping for a forced increase in wages, attached themselves to this as a popular movement liable to aid them in that endeavor. Now that they have killed the goose, it were well if workmen would be sensible enough to carefully preserve the feathers that they

may rest as easily as possible until another gosling has grown, which will not be in a day. They may accept for a fact that work will be scarce and, through the abundance of workmen, wages low, until another year, when it is probable the work of the country will be resumed, and they, having learned a most bitter lesson, may profit by it.

Association Notes.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS.



AT the regular meeting of the Association on the 6th inst., the principal business was the informal discussion of the sanitary law bill. After the usual lunch had been "passed upon" the meeting was called to order. The minutes of the previous meeting were read by Secretary Sullivan, and approved, after which the president said:

President Burnham: The regular order of business is on the report of the committee in charge of the proposed sanitary law. Mr. Clay, the chairman of that committee, is absent, and we will be much obliged if Mr.

Baumann will make the report. After a visitor, Architect W. R. Forbush, of Cincinnati, was introduced to the assembly, Mr. Baumann said:

Frederick Baumann: The committee went over this matter very thoroughly, and its conclusion was that it is impossible to get a statute made to take in all the different wants, and to make it comprehensive in every detail. We would get at it in a different way, and submit an enactment of an entirely different nature. In it should be to the effect that the boards of health, in the different districts of the state, should be established under a different system from what they are now; they should be under the state, and they should be empowered by the legislature to make laws and regulations affecting the health of the people under their charge. In order that these laws and regulations should be more perfect, we thought it

would be best to make a new law, in such a manner that the governor should be empowered, under it, to appoint a committee of architects, or a commission. We are undecided as to this. That committee should have the power of approving of what the commissioner of health has set down, and the result would be that this committee would have to be asked, from the beginning, their opinion and counsel, and that every six months the committee meet to revise their regulations, and judge if any change be necessary. Therefore, we have come to the conclusion that we will recommend the appointment of a new committee by this board, or by the chairman, as the case may be, to take this matter in hand and work it out in this direction, obtaining the assistance of counsel, to be paid for by this association, and then go deliberately and slowly to work and get up some sort of regulations, and to be proposed at our next meeting, which would bring this matter to a more practical point than we have it now.

Mr. Adler: Your committee went through the bill from beginning to end, paragraph by paragraph. Its action is summarized in the following report:

To the Members of the Illinois Association of Architects.

Gentlemen:—Your committee to whom was referred the consideration of the Act "For the regulation of tenement and lodging houses and other places of habitation," as submitted by Dr. De Wolf and Mr. Genung, of the Department of Health of this city, beg leave to report that they have given the same most careful and thorough consideration, and that they are much impressed by the thoroughness, intelligence and care manifested in the work of these gentlemen.

They find, however, that the bill, as prepared, contains clauses which are at variance with existing city ordinances and with the practice of the sewerage and building departments of this city. They also find that it prescribes courses of procedure concerning the wisdom of which sanitarians are as yet at variance. It is the belief of your committee that it is important to secure, for the support of the proposed measure, the heads of the departments of our city government, whose labors are on lines parallel to those followed by the proposed law, and that to prevent opposition from the ranks of the friends and advocates of sanitary reform, there should be eliminated from the bill all clauses prescribing methods of construction not fully endorsed by an overwhelming majority of sanitarians and constructors.

With this end in view your committee recommends the appointment of a new Committee of Three, to be appointed from the members of this Association, whose duty it shall be to confer with the officers of the Health Department and the heads of other departments of the city government, interested in the provisions of the proposed bill, and with the representatives of such organizations of public spirited citizens that may desire to confer with us and assist in shaping the proposed law, and that said committee be empowered to employ, at the expense of the Association, such legal advices as may seem expedient in the discharge of its duties.

D. H. BURNHAM,
F. BAUMANN,
W. W. CLAY,
A. SMITH,
D. ADLER.

President: You have heard the report; if there is no objection, the report will be received and the committee discharged. The regular order as per the minutes of the last meeting is, that we discuss this bill, paragraph by paragraph, but it would seem inexpedient to do so now, the time being so limited. The report is before you, gentlemen, the first proposition being as to whether such a committee be appointed, and, secondly, the method.

Mr. Adler: I think perhaps it would be but proper, before acting upon the recommendation of the committee, that we inquire of Mr. Genung, who I presume will speak for himself, and Dr. DeWolf, as to whether he is willing the bill should be taken up in that manner. Mr. Genung and Dr. DeWolf have between them expended a good deal of time and thought upon the bill, and they may not like the idea of a new committee, and perhaps other committees, going all over that bill and changing it.

President Burnham: I presume, Mr. Adler, that that would be a matter of courtesy for the committee appointed to decide. Of course, I understand it is expected first of all to consult, having the authority to do so, with Messrs. DeWolf and Genung, and go over the matter very particularly as to the points wherein they may possibly differ, and to ask them for assistance in the first draft of their bill. That would be the usual course of such a committee.

Mr. Genung: I can say this, that the intent was for the benefit of all concerned, and it was intended that it should be a harmonious action with this Association. And we also intended simply to line out what was needed in a general way, not to define specifically word by word, and then hand it to this Association to be trimmed up in proper shape for its passage by the legislature; and we feel now as if we needed that help; it would certainly be agreeable to us.

After considerable informal discussion, it was decided to appoint a committee.

The President: The chair respectfully announces the following names: Messrs. F. Baumann, D. Adler and Wm. Holabird.

Mr. Baumann: I move that the chairman be made a member of this committee.

The President: I hope that motion will not prevail, as I shall find it necessary to decline.

The secretary then read the following resolution in view of the death of Mr. H. H. Richardson:

WHEREAS, The members of the Illinois State Association of Architects have learned of the demise of Henry Hobson Richardson, of Brookline, Massachusetts, and

WHEREAS, Mr. Richardson has been most prominent and honored as a member of our profession,

Resolved, That this Association, through its secretary, convey to the family of our late co-laborer this heartfelt expression of our sympathy; and of our deep sorrow, and sense of personal loss that so great a man should be so suddenly taken from our midst.

Resolved, That this resolution be spread upon the records of the Association, and that a copy of the same be forwarded to the family of the departed.

This resolution was supplemented by the following remarks by the chair:

The President: Mr. Richardson has been regarded by many as the leading architect of the United States. For myself, I would say that he has had my deepest respect and regard, not only for his brilliancy, but for the fairness of his work. I believe he has been an inspiration to the entire profession throughout the United States, and that the effect of his work will not cease with his death. Those in favor of the resolution will so signify by rising. (The meeting rose in a body.)

No further business being brought forward the meeting adjourned.

MASTER CARPENTERS AND MANUFACTURERS.

The regular meeting, on the 18th inst., was entirely taken up in discussing the present labor situation and the eight hour movement. Members stated the situation among their employes, and, among sixteen mill-men and carpenter contractors, three were working eight hours and thirteen ten hours. At this point the discussion took a different direction, but it was apparent that thirty-five of the forty members present were working ten hours, and could secure all the workmen required on that basis and no advance in pay.

Numerous motions were made and recalled, the meeting finally voting to lay on the table a motion, made by a member who proclaimed himself a Knight of Labor, to appoint a committee to confer with the carpenters' and other unions, and adopting a motion to appoint a committee to confer with committees from the master masons, plumbers, painters and plasterers, in order that united action may be taken.

The member, who made the tabled motion, spoke well in defense of his order, but recent events seemed to have formed a different opinion in the minds of the majority. A committee was appointed, consisting of C. G. Dixon, Wm. Grace and Murdock Campbell. On motion, the president and secretary were added to this committee. The committee will report to a meeting, to be called by the secretary, probably on Tuesday, the 25th inst. About eighteen new members were reported by the membership committee.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting on the 10th instant was principally occupied by the reading of an interesting paper on Applied Ornament, by W. G. Williamson. This paper will be given with illustrations in our regular edition for June. The competition for a library, to contain 50,000 volumes, with reading-rooms, etc., was postponed to June 7. C. F. Jobson was accepted as a senior member. At the meeting last evening (24th instant) the decision of the competition committee upon the late tombstone and clock-tower competitions was announced. The report of the chairman, J. W. Root, was as follows:

Harry Lawrie, President C. A. S. C.

The committee requested by the Chicago Architectural Sketch Club to select the best designs among those presented in the competition for clock-towers and gravestones desire to report as follows:

They award among designs for clock-towers the first place to "Timepiece." The second place to "Professional." In the matter of the monument designs we prefer for first place "Bones," for the second place "Memento."

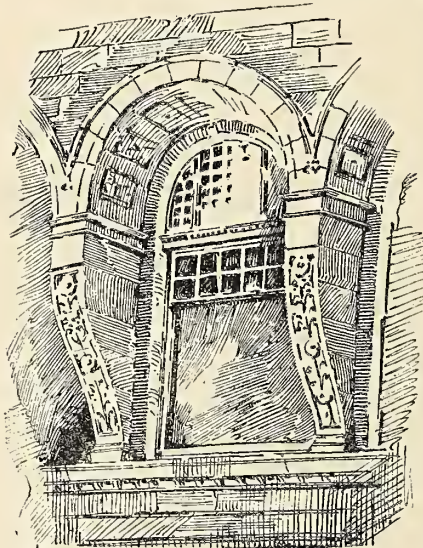
It is perhaps just to say that Mr. Jenney preferred the drawing marked "Chalk" for first place, and that Mr. Sullivan preferred "Amateur" for second place. Mr. Jenney writes that had "Professional" been drawn equally well with "Timepiece" he would have given it first place.

Very truly yours,

JOHN W. ROOT.

The Chicago Anderson Pressed Brick Company's competition will be announced later.

Synopsis of Building News.



16th Century Italian window
Harry Lawrie
del. & inv.

Allegheny, Penna.

—Architect John M. Alston reports: The outlook in February was good, but the labor agitation has put a damper on all building. Have nothing new on hand and other architects are no better off. The outlook for fall work is gloomy. The strike for nine hours is still in statu quo, and building is entirely stopped. The following work of my office is under way: For Mathew Cridge, four-story brick and stone store and dwelling, 44 by 40 feet, tin roof; cost \$9,000; John H. Trimble, builder. For James Horrocks, three three-story brick tenements, 86 by 32 feet, tin roof; cost \$6,000; J. P. Mullin, builder. For Geo. Hasley, two-story and Mansard brick and stone residence, 37 by 36 feet, tin roof; cost \$7,500; C. W. Klichmer, builder. For South Common M. E. Society, two-story brick and stone church, 67 by 115 feet, slate tower and spire; estimated cost \$30,000; first story under way; Wm. Chisholm, builder. For Mary Stakley, two-story and mansard brick and stone residence, 21 by 60 feet, tin and slate roof; cost \$5,200; Wm. Chisholm, builder. Also, a number of buildings of minor importance.

Belvidere, Ill.—Architect Julius Huber, of Chicago, reports: For Wm. C. Sauer, a block of three stores, two stories, 60 by 60 feet, stone walls, brick and iron front; cost \$12,000; not let.

Chicago, Ill.—Architect Theo. Karls reports: For F. Goetz, a two-story and basement residence on Lane Place, 26 by 64 feet, pressed brick and buff Bedford stone; cost \$10,000. For Mrs. L. S. Glade, on Halsted near Indiana street, double-store building, 44 by 72 feet, three stories and basement, pressed brick, buff Bedford stone and terra-cotta trimmings; cost \$17,000. For H. Karmann, on Washington boulevard, corner of California avenue, two dwellings, 34 by 72 feet, three stories and basement, pressed brick on buff Bedford stone, basement and terra-cotta trimmings; cost \$13,000. For F. Suhling, at 177 Sedgwick street, an apartment house, two-stories and basement, 25 by 62 feet, Anderson pressed brick, limestone and terra-cotta trimmings; cost \$6,000. For H. Brockhaus, at 636 North Clark street, store building, two-stories and basement, 25 by 68 feet, pressed brick, brownstone and terra-cotta trimmings; cost \$9,000. For Nic. and Susannah Hand, at 635 N. Clark street, three-story and basement store and flat building, 26 by 75 feet, pressed brick and buff Bedford stone trimmings; cost \$13,000. For F. Rockemer, at 4245 Indiana avenue, a frame residence, two stories on brick basement, 25 by 65 feet; cost \$5,000. For F. Ammann, on Eugene street near Franklin, an apartment house, three stories and basement, 23 by 52 feet, pressed brick, buff Bedford stone trimmings; cost \$5,500. For H. Strandes, on the southeast corner of Lincoln avenue and Diversey street, store and flat building, 75 by 60 feet, pressed brick and buff Bedford stone; cost \$14,000. For Mrs. L. R. Woodhull, at Honore

street near Adams, three-story and basement apartment house, 25 by 65 feet, pressed brick and buff Bedford stone; cost \$8,000. Work has commenced on all of the above except one, which will be let about the 22d inst.

Architects Cole and Dahlgren report: For S. M. Dickson, on Ashland avenue near High school, a two-story, attic and basement dwelling, 23 by 40 feet, frame on brick basement; cost \$2,500. For S. E. Gross, at Brookhaven, a new suburb near Parkside, five cottages near the intersection of Seventieth street and Illinois Central railroad, two stories, brick basements, and first story of two of these brick, wide verandas, and tasteful design; cost about \$3,000 each. For Thomas Barrows, at Ravenswood, a double brick dwelling house, two stories, attic and basement, 38 by 40 feet, stone basement; cost \$5,000.

Architect L. G. Hallberg is building for himself, on Gerter street near Astor, a block of two three-story residences, 40 by 73 feet, variegated brownstone fronts; cost \$16,000.

Architect F. R. Schock reports: For T. Schnell, on Throop near Adams, three-story and basement residence, 25 by 55 feet, brownstone front; cost \$12,000. Not let. For G. B. Watrous, block of three residences, on South Park avenue near 33rd street, two stories and basement, 50 by 63 feet, pressed brick, stone trimmings; cost \$13,000. For A. Werner, residence on Ellis avenue near 42d street, two stories and basement, 25 by 59 feet, pressed brick, stone trimmings; cost \$4,000.

Architects McAfee & Lively report: For S. S. Shepard & Son, in McHenry, Ill., a dryer for curing red clover blossoms, 50 by 75 feet, high basement, with drying and storage rooms above; cost \$3,500. Under way. For A. Burnham, on Calumet avenue near 27th street, two dwellings, 37 by 55 feet, two stories and cellar; cost \$8,000.

Architect Julius Huber reports: Plans for J. Mulveil, at 1700 Wabash avenue, converting a residence into a store building, cost about \$4,000.

Architect H. R. Wilson reports: For himself, a block of three residences on Groveland avenue near 30th street, two stories and basement, 66 by 56 feet, rock-faced brownstone fronts, hardwood finish on first floor, plate glass; cost \$15,000.

Architect A. M. F. Colton reports: For S. H. Gale four two-story dwellings, 65 by 55 feet, at 3847-3853 Ellis avenue, pressed brick and terra-cotta; cost \$20,000. For E. B. Butler, four two-story dwellings, 75 by 56 feet, at 2906-2910 Groveland Park avenue; cost \$22,000.

Architects H. Roeder & Co. report: For Geo. H. Sidwell, two-story residence, 25 by 65 feet, on Oakwood boulevard, pressed brick, terra-cotta and brownstone; cost \$6,000.

Architects Adler & Sullivan report: For W. L. & C. I. Peck, at 169 to 175 South Water street, a six-story warehouse; cost \$30,000. For Hugo Goodman, a two-story basement and attic residence at 3333 Wabash avenue, St. Louis pressed brick and stone trimmings, 40 by 68 feet; cost \$25,000.

Architect Geo. H. Edbrooke reports: An additional story to the Adams Express Company's building, 187-9 Dearborn street, three new elevators, new hallway finished with Georgia marble, and fitting handsomely in oak a room in the rear for the American Exchange National Bank, furnished with burglar-proof safes, etc. The total cost of the improvements will be about \$40,000.

Architects Addison & Fiedler report: For B. Hagaman, at 210 State street, a six-story business building, 20 by 90 feet, iron and buff Bedford stone; cost \$16,000.

Architect Oscar Cobb reports: For Geo. D. Holden, four-story flat building, 42 by 62 feet, at 3539-41 Cottage Grove avenue, pressed brick with terra-cotta trimmings; cost \$20,000. For Jennie McCullough, three-story and basement flat building, 25 by 64 feet, at 78 Dayton street, pressed brick terra-cotta trimmings, stained glass; cost \$7,000. Contracts are not yet let for Owens & Goldy Opera House, 368-378 North Clark street. It will be three stories and basement in height, 102 by 132 feet, the opera house occupying 78 by 112 feet; cost of building will not be less than \$100,000.

Architect J. J. Flanders reports: For S. J. Schulte, two-story and cellar and attic frame dwelling, 30 by 50 feet, on Jefferson avenue between Fifth and Fifty-first streets; cost \$3,500.

Architect C. C. Miller reports: For L. Seaman, two-story and attic and basement residence, 24 by 67 feet, at 3312 Calumet avenue, Anderson pressed brick brownstone trimmings; cost \$11,000.

Architect T. V. Wadskier reports: For Mrs. S. A. Pope, two-story and attic and cellar residence, 25 by 75 feet, on Michigan avenue and Twenty-ninth street, Anderson pressed brick, terra-cotta and brownstone; cost \$18,000. For A. Cummings, three dwellings, 50 by 60 feet, corner of Thirtieth street and Wabash avenue, pressed brick, stone trimmings; cost \$12,000; contract not let. For Arthur Orr, three-story stores and flats, 40 by 100 feet, corner Thirty-ninth street and Indiana avenue, pressed brick and terra-cotta; cost \$20,000; contract not let.

Architect C. M. Palmer reports: For John Gubbins, three-story factory, 28 by 100 feet, at 349 South Canal street, Indiana pressed brick; cost \$10,000.

Architects Rae & Wheelock report: For C. H. Nichols, two-story and attic and cellar residence, brick and stone, on Grand boulevard; cost \$15,000.

Architect Jas. L. Silsbee reports: For Geo. Temple, two two and one half story dwellings, 50 by 60 feet, pressed brick fronts; cost \$12,000; contract not let.

Architects Fromman & Jebson report: For Hemper Bros., four-story and basement store and flat building, on North Halsted street, pressed brick and brownstone front; cost \$35,000.

Architect E. S. Jennison reports: For John R. Bensley, eleven two-story and attic dwellings, Oakwood avenue, near Thirty-seventh street, pressed brick with stone and terra-cotta trimmings, all modern improvements; cost \$60,000.

Architect Adam Boos reports: For B. M. Schultz, three-story flats, on Hammond street, pressed brick and stone; cost \$15,000. For B. Brosterhaus, three-story dwelling on Mohawk street, pressed brick and stone; cost \$10,000.

Architect Geo. S. Spohr reports: For J. Sandberg, four-story and cellar building, 75 by 100 feet; cost \$40,000; under way. For Chas. Gauss, four-story and cellar building, 66 by 98 feet; cost 25,000; plans made. For Mrs. M. Johnston, four-story and cellar building, 36 by 98 feet; cost \$10,000; plans made. For Dr. O. Ryan, four-story and cellar building, 30 by 85 feet; cost \$10,000; plans done. For D. Sander, two-story and cellar building, 24 by 60 feet; cost \$4,000; under way. For Richards & Strausheim, three-story and cellar building, 50 by 100 feet; cost \$8,000; plans made.

Cincinnati, Ohio.—The formal opening of the new Lincoln club house, Mr. Samuel Hannaford, architect, took place May 18. The club has always occupied the premises known as the Mendenhall residence, at the southwest corner of Eighth and Race streets. The building has been remodeled and rebuilt at a cost of \$28,000. It is three-stories high, pressed brick and freestone front.

The West Art Museum, J. H. McLaughlin, architect, was dedicated May 17. The portion of the building completed is fireproof, and consists of the center pavilion and west wing, having a total length of 214 feet, and a west frontage of 107 feet; cost \$78,000.

Corpus Christi, Tex.—Architect Charles Carroll reports: Present condition and outlook fair. Only building of consequence now going up is the convent school building, 43 by 100 feet, for the Nuns, Order of *Incarnate Word*. It will be three-stories and mansard, steam heating, lighted by gas; cost \$20,000; Chas. Carroll, builder.

Crown Point, Ind.—Architect J. J. Flanders, of Chicago, Ill., reports: For Warren Hayward, two-story and cellar and attic frame residence, 30 by 46 feet; cost \$3,500.

Fayette, Mo.—Architect S. B. Abbott, of North Springfield, reports: For A. M. Pastlewalt, frame residence, 28 by 60 feet, west wing, stone foundation; cost \$6,000; under way. A. M. Daniel, builder.

Fort Worth, Tex.—Architect J. J. Kane reports: At present building is dull; prospects are good. Strike for eight hours has to some extent depressed building business. Have the following work in hand: For Bosque county, Texas, three-story stone court house, 85 by 88 feet, tin roof, fireproof building; cost \$52,000; P. J. Loonie, contractor. For J. F. Ellis, four-story stone hotel building, 95 by 110 feet, tin roof; cost

\$55,000; under way; Townsend & Lusher, builders. For Dr. Norton, two-story brick store, 25 by 90 feet, tin roof; cost \$4,500; contract not let. For E. Wener, two-story frame dwelling, 28 by 76 feet, tin roof; cost \$3,000; contract not let.

Green Bay, Wis.—Outlook for building is good. The question of water-works for this city is being agitated, and it is thought that \$90,000 or \$100,000 will soon be appropriated for the purpose.

Architect D. M. Harteau reports: For city of Green Bay, two-story brick addition, 38 by 87 feet, to school building; cost \$5,000; plans completed. Also other and less important work.

Indianapolis, Ind.—The United States Encaustic Tile Works were sold May 15, to a syndicate headed by John J. Cooper, treasurer of the state, who is associated with Jack Landers and John Pickens, the latter of Tipton, and Jos. E. Gray, son of the governor. The price paid was \$73,000, subject to an \$80,000 mortgage, held by the Portsmouth N. H., Savings Bank.

Little Rock, Ark.—Building matters are very quiet just at present, and have been much affected by the strikes in the southwest, as most of the building material comes over the "Gould system." But there are good prospects of a revival of business as soon as labor difficulties are adjusted.

Messrs. Cohen & Cohen have commenced work on a two-story frame hotel building, 50 by 60 feet, to cost \$4,000.

Mr. James Gausaldi is contemplating the erection of a block of brick tenements, 150 feet frontage.

Petuf Bros. are building a \$2,500 frame dwelling for Mr. R. B. Kendall.

A one-story addition to the Guapen cotton mills, 50 by 90 feet, is contemplated.

Mr. Sol. Johl has received bids on a residence to cost \$4,000.

Marshalltown, Iowa.—The plans of J. S. Blake, of Des Moines, have been adopted for the Iowa Soldiers' Home to be located here.

Milwaukee, Wis.—Architect Julius Huber, of Chicago, Ill., reports: For Mr. J. Benjamin, coal shed and hoisting machinery, 470 by 420 feet; cost \$20,000; not let.

Minneapolis, Minn.—Plans are being prepared by Architects Kimball & Jones for a hotel to be erected on corner of Washington and First avenues north. It is to be five stories in height, built of brick and stone; estimated cost \$100,000.

Architects Hodgson & Son are preparing plans for a five-story stone building, 44 by 66 feet, for the Bank of Minneapolis; cost \$50,000.

Architects Haley & Allen, for J. S. Heaton, seven-story brick building, 99 by 120 feet; cost \$70,000. Mr. J. Haley is the architect for a five-story building, 98 by 110 feet, for Wolf & McCormick, Third street and Third avenue north.

Work has been commenced on the new twelve-story hotel of Messrs. Gates Bros.; the estimated cost of the building is \$500,000. Mr. Gates is the architect of the building, which is said to be admirably planned.

The following building permits have been issued recently: J. D. Woodworth, two-story ten-room dwelling and barn, on Highland avenue; cost \$5,500. Francis A. Crocker, two-story, twelve-room frame dwelling, and barn, on Second avenue south; cost \$5,300. O. Hamlin, four-story brick warehouse, 44 by 100 feet, on Third street north; cost \$22,000. B. D. Sprague, two-story frame dwelling, 3316 University place; cost \$5,000. K. W. King, two-story frame dwelling and barn, 2744 Stevens avenue; cost \$4,300.

Nebraska City, Neb.—Ground has been broken for the erection of a handsome summer residence on the farm of Mr. Warner, of Sprague, Warner & Co., Chicago, Ill. The building will cost \$40,000 when completed.

New Corporations.—The Metallic Fire and Electric-proof Building Company, at Chicago; capital stock \$500,000; George C. Plummer, Alonzo T. Boone and Thomas Ogg Shaw, incorporators.

North Springfield, Mo.—Architect S. B. Abbott reports: Outlook fair; several plans for Kansas; will report soon. For S. W. McLaughlin, a California villa, 48 by 742 feet, California red wood, creosote stains, galvanized iron cornice, tower, all modern improvements, gas, water, steam, electric bells, etc.; cost \$20,000 up; and covered work done by the day. A. Meshler, foreman. Also for same, frame barn; cost \$2,000. Other work outside the city.

San Antonio, Tex.—In the May issue of THE INLAND ARCHITECT we erroneously credited Mr. Leopold Eiditz, of New York, with being the architect of the county and city hospital buildings. The item followed that of a bank building for which Mr. Eiditz is the architect, and was not paraphrased as it should have been. Messrs. Wahrenberger & Beckmann, of San Antonio, are the architects of the hospital buildings and should have the credit for the work.

St. Paul, Minn.—Architects E. F. Mix & Co., of Milwaukee, Wis., have made plans for an eight-story building for the *St. Paul Daily Globe*, to cost \$400,000; work has been commenced.

Edward Langevin is to build a new theater building, 150 by 210 feet; estimated cost \$300,000.

Among the building permits recently issued the following are the most important: Chas. W. Ames, two-story frame dwelling on Grand street; cost \$6,000. John E. Richardson, two-story frame dwelling on Marshall street; cost \$5,500. Mrs. A. Driscoll, block of two-story brick veneer dwellings on Pleasant avenue; cost \$18,000. Cunningham & Haas, two-story double dwelling, brick, to be erected on Cedar street; cost \$10,000. Andrew Marn, two three-story brick stores and dwellings on Rice street; cost \$8,000.

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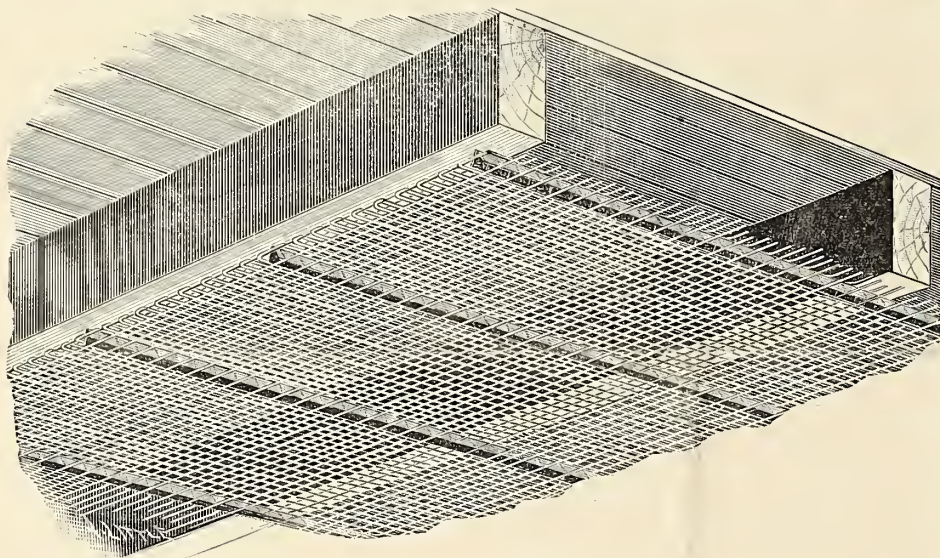
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Proposals may be submitted for the entire work of the building complete, or for any classified portion, the building committee reserving the right to accept any regularly scheduled bid on the whole or any part of the whole, or to reject all bids.

Samples of stone and other material must be furnished according to the printed instructions to bidders.

No proposals will be considered unless made out on the schedule forms, which will be furnished to intending bidders.

A good and satisfactory bond will be required of parties entering into contract with the building committee in amount of 30 per cent of the contract price.

All bids must be placed in sealed envelopes and indorsed proposals for Y. M. C. A. building, and addressed to JAMES W. HARLE, Chairman, Atlanta, Ga.

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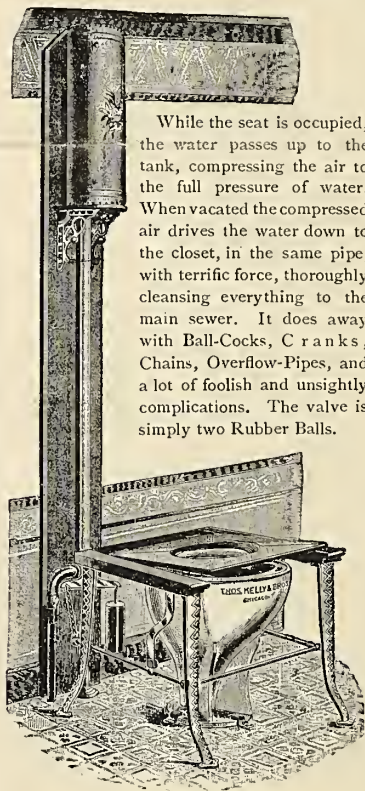


FIG. 3.

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THE INLAND ARCHITECT AND BUILDER.

Vol. VII.

No. 9

JUNE, 1886.

THE INLAND ARCHITECT AND BUILDER

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Construction, Decoration and Furnishing
IN THE WEST.

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(A NATIONAL ORGANIZATION.)

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THE Boston Society of Architects is taking steps toward securing the erection of a fitting memorial to the late H. H. Richardson. It is proposed that architects and architectural societies contribute, and the memorial be placed in Trinity Church, Boston. Contributions can be sent to Mr. W. G. Preston, the treasurer of the Boston society, at 186 Devonshire street, or to any member of the committee, Messrs. E. C. Cabot, R. S. Peabody, A. Rotch, R. D. Andrews and E. M. Wheelwright. We receive this information through the *American Architect*, as we go to press, and have given the subject no special thought, but while the life of so great an architect deserves fitting commemoration, it seems to us that the architect builds his own monument, and the best monument to Mr. Richardson will be his greatest work. A memorial placed in some Westminster, among the nation's illustrious dead, would meet the approbation and support the Boston society propose to call for. The lack of such a place has been pointed out by this journal in Mr. I. K. Pond's able article on the subject, and his design and outlined plan have been recently advocated by the editors of the *Century*. We are thoroughly in accord with any contemplated movement that has for its object the perpetuation of the name of Mr. Richardson.

IN regard to the successors of the late H. H. Richardson, the *American Architect* says:

We learn that the late Mr. Richardson, before his death, had a paper drawn up in which he signified his wish that his business should be continued by Messrs. G. F. Shepley, C. Rutan and C. A. Coolidge, who have long been his principal assistants. Mr. Rutan, who has been with Mr. Richardson about fifteen years, has, during the greater part of that period, acted as manager of the business affairs of the office, while Messrs. Shepley and Coolidge have been the most trusted draughtsmen, and Mr. Shepley in particular, who is engaged to be married to Mr. Richardson's daughter, has long enjoyed the most intimate relations with his chief. These gentlemen are perfectly familiar with all the details of the work now in hand, and there can be no question of their ability to carry it out in accordance with Mr. Richardson's intention.

These young men deserve the greatest encouragement from their professional brethren, and we have faith in their ability to carry out the work already commenced. The years passed under so great an architect should have imbued them largely with the spirit of his work, so that the forms which his genius designed will still find faithful interpreters in these his pupils.

AFTER a year spent in trying to secure a rehearing, A Buddensiek, the notorious "skin" builder, of New York, has gone to Sing Sing to serve out his sentence of ten years at hard labor, and a fine of \$500. It is well that an example has been made that will teach builders their responsibility; but there is another kind of a "skin" builder with whom it is hard to deal, though his guilt is of the same nature as that of the New York convict. This is the owner who wishes to build by the yard regardless of the quality of his structure. He usually finds some contractor who can "make plans," and by giving him the job gets those "plans" for nothing, or if he employs an architect, however skillful that architect is, his building is sure to have defects, structurally, wherever he can induce his architect to use a cheap material. It has become a question how far an architect can allow his client to dictate against his better judgment. Though the greater the skill of the architect, the cheaper the building can be built. A recent fire in a mammoth six-story building in Chicago demonstrated this fact and its attendant evils. The utmost lightness of material and the smallest number of partition walls were placed in the building, situated on a corner with an alley in the rear, the entire internal structure standing on iron columns. Within an

hour after the fire was discovered, the entire front and rear walls collapsed and fell into the street. We do not know the owner of the building, and he may have desired to sacrifice stability for lightness rather than with a view to economy; but in either case we are quite sure he went against the best judgment of the architects, as they are among the best in the city, and, structurally, the building was all that architectural skill could make it under the conditions. It is certain that architects are largely governed by commercial considerations, and are bound to build the best they can with the money that is allowed them, and it is the owners who deserve severe censure and even prosecution when buildings collapse, and it is proven that the architect has been allowed no "factor of safety" in his work. The Buddensieks of Chicago are too many, and are found not alone among men of small means, but those who control large and wealthy estates.

ONE of the most serious risks which building contractors incur and yet one which many of them habitually overlook till a costly damage suit opens their eyes, is the civil responsibility of an employer for injuries suffered by his employes while in his service. A recent suit in Paris, reported in *La Semaine des Constructeurs*, is instructive as showing the tendency of French courts to hold contractors to increased responsibility for their workmen. A mason employed in the erection of a building in Paris was struck on the head and instantly killed by a large piece of iron, which was accidentally dislodged from an upper floor directly over where the mason was at work. His widow sued the contractor for twelve thousand francs damages. It was held to be a contractor's duty diligently to care for the safety of his men by all reasonable means, to warn them of the dangers attending their employment in various locations, and to furnish adequate protection where possible. In this case, the contractor, failing to do this or even to warn the man of his danger, was responsible for the fatal accident, which a little more care on his part might have prevented. The editor remarks, in comment, that the tendency of the French courts is to increasing severity in estimating the responsibilities of employers for the safety of their workmen, and cites another case where it was explicitly held that contractors are bound "to care for the safety of their men, and to protect them from the dangers incident to their work;" that "under penalty" they must anticipate "possible causes of accident" and take, and cause to be taken, by their agents, all necessary precautions to prevent or avert them; that "they are bound even to guard the workmen against the consequences of their own imprudence." The general rule of the French courts is further to acquit the employer of responsibility, only where "the imprudence of the victim has been the sole cause of the accident." This looks severe, but we should hesitate to say it is not in strict accord with the dictates of a sound public policy, as well as of humanity. It would certainly be well for American contractors to lay it to heart, as a measure of their moral, if not legal responsibility.

IN connection with the rigid rulings of the French courts, it may be well to note the tendency of English law on the same subject. A recent case, that of Griffiths against the St. Katherine's Dock Co. of London, reported in the *Building and Engineering Times*, furnishes an illustration. The plaintiff was injured by the fall of an iron door, which had been in an unsafe condition for a long time previous to the accident, and this fact was well known to the defendant company, as was proved and admitted on the trial. The court held that this alone was not sufficient to make the company

answerable in damages, that it was necessary further to prove that this danger was unknown to the plaintiff, up to the time of the injury. The general principle was laid down that, "if a servant enters or continues in an employ, knowing of the danger incident thereto, he cannot recover, since he might have escaped by leaving the service." It may be well, perhaps, to admonish some classes of employes, that if they continue in dangerous work, they do so at their own risk; but it is not difficult to imagine cases where the peculiar nature of the business or of the workman's position is such that he is practically unable to leave his employment, though he knows it to be dangerous. In overcrowded London, a man who should throw up one place might suffer much privation before he could get another, and the new place might prove yet more dangerous than the old, and farther from his home and in many other ways less desirable. But it is difficult to imagine a reason other than criminal negligence, why a corporation should knowingly permit the premises occupied by its workmen to be in an unsafe condition and remain so; and the law which relieves a corporation of responsibility for accidents which happen to its men through such willful neglect to repair its own premises, on the heartless excuse that the injured men knew of the danger, looks more like a temptation to manslaughter than anything else. We trust it will not be considered an authoritative precedent for American courts.

AN example of the danger in uncredited quotation is found in the publication of the constitution and by-laws of the Association of Ohio Architects in the last number of our usually circumspect and accurate contemporary, the *American Architect*. A new publication, the *Western Architect*, of Cincinnati, some time ago published the same matter, and among other mistakes called the state association the "Western Association of Ohio Architects" (probably coining the name from the fact that the state association is formed under the rules of the Western Association). The Cincinnati journal might naturally be supposed to have the facts at hand, and had the *American Architect* given that journal credit for the reprint, it would have cleared itself of the charge of inaccuracy, but since it decided to give so much valuable space to the matter, a better plan would have been to have printed direct from the association's publication, or from the official report published in THE INLAND ARCHITECT intermediate news edition of January, and not from an unofficial source. Ohio architects will certainly appreciate the compliment tendered by the eastern journal, but would like their state society known by its proper name, the Association of Ohio Architects.

ARCHITECTURE is a very serious occupation in the main, but it has its queer incidents occasionally which are none the less amusing that their authors may be as blissfully unconscious of the humor as was Moliere's bourgeois gentilhomme when he had written prose. Not long since a very successful eastern architect was inspecting a sample of pressed brick which was unusually perfect in edge, surface and color. Quite to his chagrin of the expectant manufacturer he condemned the brick for the very perfections which it was supposed would elicit surprise and admiration, and justified his criticism by the remark, "*The Almighty never made a straight line.*" This pregnant assertion was uttered with an evident belief that it was as conclusive and irrefutable as the law of gravitation; and the listener politely forbore to ask his guest what possible bearing it might have upon the brick manufacture. If a man prefers a mottled, stained and

discolored brick to a clear one, or a twisted, warped and crooked brick to a straight one he is entitled to his choice, and he can save money by using the culls, but he ventures on dangerous ground when he appeals to primeval man or to the Almighty in support of his peculiar notion. As well object to popular amusements because Adam and Eve never went to a circus, or to the use of clothing because the Almighty never made a pair of pants nor a skirt.

IN this case the premise itself is untrue. If this architect will go to the seashore, or to the edge of any of the great lakes on a calm, clear day and scan the sharply defined horizon between sky and water; if he will note in the tense plumb line the direction which gravitation chooses for its path toward the earth's center, if he will observe the huge beams which the rising or setting sun often shoots athwart the heavens when emerging from an obscuring cloud, and then if he will turn to the marvelously varied and wonderfully exact forms of crystallization he may discover that nature abounds in lines more undeviatingly straight and planes more geometrically true than any brick maker has ever yet produced; and the latter may proceed with a clear conscience in his endeavors to perfect his product. It is true, of course, that in nature, as we observe, its curved lines are more numerous than straight ones, and it is equally true that perfectly level and perfectly vertical edges and surfaces are rare, compared with sloping ones, but we suspect that a contractor who should try to justify a wall that was out of plumb, or a lintel which was an inch or two higher at one end than at the other, on the plea that the Almighty never made a perfectly vertical line, nor a truly level one, would quickly discover that his logic was as unsatisfactory as his construction, and would peremptorily be required to correct the latter whatever he might do with the former.

THE publishers of the *Northwestern Architect* have undertaken the collection of an exhibit of architectural drawings, to be placed in the coming Minneapolis Industrial Exposition, which opens August 23, and have sent circulars to architects generally, asking them for contributions of drawings. The enterprise is a worthy one, and the proprietors of that journal deserve the support they ask for in making the exhibit in every way creditable, both in number and in quality of designs. The exhibit has received the indorsement of the State Architectural Association of Minnesota, and as the invitation is open to all draughtsmen and members of sketch clubs, it will doubtless be a complete success, towards which we would direct our best wishes.

AS we go to press, the depressed condition of building interests seems to be at an end, and a more active, though not a complete, resumption of building has commenced. So much time has been lost, and work laid over until next season, or abandoned, that the prospect is strong that labor will be plenty and lower than for several years past. Already the question of an eight-hour day seems to have been abandoned, and there is a strong sentiment among the master builders to give the men a half-holiday on Saturday, but this will be done by the individual employers rather than by universal rule. In fact, the mismanagement and the consequent disaster into which the leaders of the trades unions have lead the workmen generally, has produced a strong sentiment among the men in favor of their abolition. It is certain that the trades union of the future will be a much more creditable body than of the past, and arbitration will settle all differences between employers and the employed.

Applied Ornament.*

BY W. G. WILLIAMSON.

THE beauty of a building is in its ornament. As a cutter will take a rough, ragged and jagged dirty lump in his hands and manipulate it and return it to us a rare gem of great brilliancy, so might we with our buildings. There are numerous styles of ornamentation, each one of which would make a good subject for an essay—the Mooresque, with its delicate stucco ornament and handsome coloring, as found in the Alhambra, in Spain, etc.—but time will not permit.

Architectural ornament is of two kinds—*constructive* and *decorative*. By the former is meant all those ideas such as columns, capitals, brackets, heavy moldings and the like, which serve constructively or emphasize construction; by the latter, such as fine moldings, mosaics, conventionalized foliage, etc., which enrich the constructive forms.

The first principle of designing is construction. Architecture is simply the art of ornamented construction, in grouping the parts and producing the most stately and ornamental effect consistent with the uses to which it is to be adapted and applying such ornament as should accentuate and be in harmony with the construction, the ornament being the most elegant that could be designed. Do not allow construction to entirely control your design to such an extent that the design would be injured thereby.

In the Gothic it frequently happens that a shaft is put in from the floor to the vault merely to satisfy the eye, although it is entirely unnecessary to the construction, and in the Romanesque this is generally omitted, also in early English Gothic.

The tendency of style in America is toward the round arch, expressive of beauty and elegance. With forms, the square and angular are expressive of strength and power, curves, of softness and elegance, and an effective combination of both produces beauty. Vertical lines prevailing to a greater extent than horizontal produce an appearance of lightness and height; horizontals prevailing, a look of lowness and breadth, that which is striven for today—the ornament should be in keeping with this. Designers, if they wish to have beautiful buildings, must design their ornament to fit the place—each string course, each column, each ornament thoroughly studied, that when executed it will charm with its grace and poetry the beholder.

How much greater is this creation than the mere repetition of the same molding or ornament. In a dwelling or other such small structures, the structural need not be as pronounced as in our commercial buildings, and it is perfectly admissible to entirely decorate the surfaces. But it must be done with a finer degree of elegance than for a mercantile establishment, located as it is at home for constant critical attention. It does not signify that if an ornament looks well in one place it will appear to the same advantage in another. Look at executed works or examine your photographs and note the effect by contrast between highly wrought ornament and plain surfaces judiciously conceived.

Ornament is to a building what expression is to music—expression in the lights and shades, beautiful in the coloring and grand in the conception, rendered with a freedom and inspired with a firmness of purpose. How distressing it is to hear one of Beethoven's symphonies played as written, note for note mechanically. That is merely the construction or theme and should be elaborated upon, which is accomplished by the graceful, telling touches and variations that must be introduced to make a complete harmony and delicate blending of thought, rippling along in waving gradations.

If the cove in a string or sill course is to be ornamented, the most appropriate figure or ornament to express strength would be either the dentel, egg and dart, dog tooth or some very conventional leaf, as these have the stiffness that denotes power. It is almost necessary to use some such figure, or that which the poetic fancy of the designer might dictate. If we have a panel to fill with ornament, we first make our construction by lines or moldings bounding the carving or painting; this only apparently takes the weight from the foliage or figure, but it fulfills its purpose and pleases. If a number of columns are to be used constructively or decoratively about a doorway or other prominent position there should be an echo of it somewhere else. The same may be said of any feature.

Let us take an example and see what the result will be if the design is studied. Say for illustration a factory building that is to have some claims to architectural beauty, removing it from the class of engineering.

First, the effect that we wish to obtain will be a thoroughly constructed, substantial appearance, and a surplus of strength with good lines, openings well grouped and general proportions thoroughly analyzed, base or basement bold, giving a look of security. Now we are ready to beautify it to suit the requirements and location.

The entrance demands our attention as an especial feature. Possibly it might be an arcade or wagon-way. Add the ornament, emphasizing the construction—decorate the construction, do not construct the ornament. (The only manner in which it is advisable to construct ornament is when there are several colors of material—brick, marble, granite or others—to be employed; the combination is constructed ornament). What ornament is used should be bold.

Next give our attention to the sill courses, if there are to be any; if not, the floor line should at least be expressed on the wall surfaces in some way, either by simple moldings or moldings ornamented. This is to be advised, as it rather binds the building together. This again is only apparent construction and is not always necessary.

Moldings in themselves are constructive or structural, so that they can be aptly ornamented by such figures as the billet or lozenge and others, as the fancy or taste of the designer may dictate, all being, if I may so call them, geometrical ornaments, perfectly adapted to any building, particularly this which we have taken as an example. Accentuate strongly the bases, diminishing in strength as you proceed upward, and finish with your cornice, of which we will speak later. If there are any columns or pilasters that you may wish to enrich, it may be best not to decorate them if there is the

* Paper read before the Chicago Architectural Sketch Club, May 10, 1886. Revised by the author, and illustrations drawn expressly for THE INLAND ARCHITECT AND BUILDER.

appearance of great weight above. But if you will, do so with care; design so that the surface or constructive part will be carried to the base, possibly by plain surfaces of stone vertically, with ornament between or the ornament over all; not as though the column was built of leaves or flowers, but placed on the face with substance behind, like a vine clinging to the trunk of a tree, which should be so clearly expressed that there will be no room for doubt. The same can be said of capitals.

Avoid all application of large columns merely as decorative features; they are too expressive of weight above where there is none. Fergusson, in his history of architecture, extols the Greek and Roman temples to the skies, but severely criticizes some modern buildings where the column has been used in a similar manner, that is as a screen or wall veil running through several stories. If the design requires something of this kind, screen it with repeated stories of column arcades, such as are used in Pisan architecture, so thoroughly understood by them. The same can be said of brackets and other constructive features where they are applied decoratively. Truthfulness and simplicity is what we must try to inspire our work with; if we do this we can certainly depend upon it that the design will be satisfactory, even without thoroughly studied ornament. Do not misunderstand me that I would encourage hasty thought expressed in ornament; to the contrary give your most careful attention to every minute detail, and it will repay you in the end. Do not allow your quarter-inch scale or even one-inch scale drawings to go into the hands of the stone-carver, thinking that he knows more about it than you, but draw everything full size, or at least to some convenient scale for yourself and stone-cutter—say quarter full size—then always insist on models of the most important parts, if not all your work; change them if necessary; do not hesitate to work them over or throw them aside if need be. Judge the distance and height from the eye; study your lights and you will be surprised at the effects that you have obtained perhaps for the first time.

If a church is under consideration, the portals and spire, also the windows, should be the first things after it had been constructed that the designer would elaborate; not necessarily profuse with ornament, but carefully studied outline and possibly a few bits of rich detail, which may be more telling than if more highly embellished. It will at least compare favorably and would be an oasis in the desert of architecture. Magnitude is essential to monumental buildings, lending a dignity to it if nothing more than a huge mass of masonry, such as the walls of Old Rome, and some of its aqueducts.

Imitation in construction or ornament none of us like. But how many among the designers will crown their fine cutstone or marble edifice with a highly wrought galvanized iron cornice. The truthful artist would rather see a stone coping on top of the plain wall than this. You may plead economy; but is not the coping beyond in beauty and expression this flimsy device of iron, which you cannot make look like stone, as is attempted every day? If galvanized iron must be used, treat it as such by making it light and airy, without any carrying capacity.

I may be diverging from the narrow path that has been marked out for me in "Applied Ornament" and getting into the broad highway of architecture. If it is so, I hope that I will be excused, as I feel that attention must be called to our besetting sin, galvanized iron.

While speaking of cornices, it will not be amiss to suggest for discussion the appropriateness of large projecting cornices for buildings with high roofs. It would seem that reason would tell us this is wrong, but there may be examples that would be contradictory. If a high roof is put on a building it is to be seen and have some architectural value. And it will take but a slight projection of cornice to entirely hide a roof. So for this reason alone a cornice of small projection would suggest itself. But if the cornice was to be the crowning feature, then the designer can provide for what would be best suited for the purpose. This is of the utmost importance to a building. Constructively it is correct, as its requirement is primarily to protect the walls from the rains and snows, and as such it can be finished to any degree of richness.

Richness we have in the Church of St. Paul and St. Louis at Paris. But at what cost? A sacrifice of construction and structural requirements. The façade is three stories in height. The general effect of richness is produced by a jumbling together of the orders; the ornament coarse and brutal. This I cite as an exceptionally bad example of the architecture of France in the seventeenth century (a modern age) and something to be avoided.

Contrast this with some examples of early Renaissance in Spain; and really Spanish details are delightful to look upon. Each room is expressed on the exterior, windows perfectly grouped. In speaking of Spanish windows, they are not themselves expressed, but are rather back from the outer wall, with loggia richly and appropriately ornamented with large wall surfaces between, joints clearly defined that might even be called ornament, so effective are they. Yet they are a neutralizer of richness; altogether making a pleasing proportion between walls and openings, which are so essential to architectural effect. A good example of this is the Carcel del Corte at Baeza.

Let us jump from Spain to Constantinople; not that there are other good examples there, but that it would be impossible to call attention to all the beautiful Romanesque detail to be found in Spain. The lover of ornament would revel in the Cathedral of St. Sophia at Constantinople. The original church, which was erected by Constantine, was burned to the ground in the year 532, and the present magnificent church was re-erected by Justinian. The building externally has not much claim to architectural design; that is, in detail, but its groupings are perfect, although it would appear that the intention was to cover the whole with rich ornament, possibly marble. But the troubles of the times after Justinian's death interfered. We can with very little effort imagine what it might have been if carried out with the spirit displayed on the interior. All the columns are of porphyry, verd antique, and other rich marbles of the most precious kinds.

The architect of this church has improved on the study of others who had demonstrated that a Corinthian capital, with its hollow, curved bell was not appropriate to an arch formation. Although when the columns were close together and had only a lintel to support, this form was sufficient. The result shows how successful he has been in reversing the curve out-

ward from the neck to the abacus, and also with the treatment that has been employed. This has a finer effect when the seat of the arch is almost twice the diameter of the column.

St. Sophia from the floor to the vaults is a grand and vigorous inspiration. In the lower order the bases are very low and beautifully molded, and the columns plain. The wall surfaces are flat and the ornaments relieved by incision. The capitals are covered with ornament. This is an exceptional instance of covering the entire bell of a large capital where there is apparently great weight to be carried, but it is done so nicely and with large conventionalized acanthus leaves that it cannot be criticised. Look at the stubborn strength of the close curled, graceful volutes, structural cropping out amid the ornament. This we should recognize as very essential to be represented in all carving.

There is one point in this church with which considerable fault is found. That is in the arches. The ornaments are rich, but are carried too far; there is a taking away of strength where strength is required. The spandrels of the lower arches are boldly carved, and left for their own shadow to bring them out in their beauty, but in the upper arches the ornament is relieved by a background of black or dark-colored marbles. All of the wall surfaces are covered with rich mosaics of marble. Words cannot speak the praises of this beautiful building. As an excellent example of Byzantine architecture it is worthy of close attention, as the ornament is so harmonious with our ideas of today and can be freely used with the Romanesque. More attention is paid to the stem than the leaf in this style.

Another fine work in this style is the Persian palace at Mashita, Syria. The wall surfaces are decorated in an elegant manner, with a series of large triangles resting on a richly carved string course. These examples are only a few of the thousands that might be cited, but it will suffice, as there is enough to study in these alone for illustration of this paper.

America has lost one of its strongest men in architecture, one who has given the start to the Romanesque in this country and developed it in a manner peculiarly his own, exquisite in detail. Mr. Richardson has left examples that will always be looked upon with pleasure, and his memory will long remain with us. His particular interpretation of the Romanesque has influenced the younger men to endeavor to follow him. The style is broad enough to be developed in many ways, as it was left in a state of transition throughout the Old World.

Architectural designing some years ago consisted in the closest possible imitation of the styles and orders employed by the Romans. Let us avoid this, but we may take the examples before us and adapt them to our more modern wants. We cannot make one of our commercial buildings like a Greek or Roman temple, nor do we want to, but we may learn from their experience what is good in proportion and get suggestions from their ornament with nature as our guide. Let us hope that we may be able to find something to study and admire in each stage and each style of the architecture of past ages. And we will find that the designers of these buildings would be able to give some valid reason for everything they have done.

An English Electric Light Plant.

SAYS the *Builders' Weekly Reporter*, quoting from the *London Times*: The first practical example of electric lighting from a central station by direct current has just been completed at Paddington in connection with the Great Western Railway. The installation is the largest yet accomplished in this country, and was inspected on Monday evening by a large party of scientific gentlemen, among whom were Sir Frederick Bramwell, Sir Andrew Clarke, Sir William Thomson, Major Armstrong, Admiral Selwyn, Captain Halpin, Mr. Willoughby Smith, Mr. H. Clifford, Mr. Shuter and others. The installation has been undertaken by the Telegraph Construction and Maintenance Company to test the practicability of central station lighting. The district lighted comprises the Paddington passenger and goods stations and the hotel, the locomotive station, the Royal Oak and the Westbourne Park stations, all the offices, yards and approaches to the various stations, and the line of the railway itself from Paddington to Westbourne Park. The district is one and a half miles long, and covers 67 acres of ground. The engine house is a short distance from the terminus, and the electric system is that of Mr. J. E. H. Gordon, the manager of the Telegraph Construction Company's electric light department. There are three Gordon dynamos, of which two work, and one is held in reserve and is always kept slowly revolving, ready for use at a moment's notice. The dynamos weigh 45 tons each, and are wound to give a pressure of 150 volts. When all the lamps are on, the machines give about 2,000 amperes each. Each dynamo is driven by a compound tandem engine of the vertical inverted cylinder type by Rennie, and capable of indicating 600-horse power. The dynamos are coupled direct to the engines, belts being dispensed with. The magnets of each of the large dynamos are excited by a Crompton direct current machine (the Gordon machines producing alternating currents) driven by a Willans engine. The main dynamos are driven at about 150 revolutions per minute. A double system of mains is laid throughout, and every precaution is taken to insure safety from the accidental extinction of any of the lights. The light is distributed by 4,115 Swan glow lamps, each of 25-candle power, by 98 arc lamps, each of 3,500-candle power, and by two arc lamps, each of 12,000-candle power. The total light is thus equal to that of about 30,000 ordinary gas jets. Every lamp has a separate switch, so that it can be turned on and off independently. The glow lamps are entirely under the control of the users and not of the suppliers, just as in the case of gas. The current is on day and night, except for three hours in the daytime on Sunday, when it is interrupted for testing purposes. The installation thus approximates to a house-to-house supply of electric light, and it has worked successfully in every respect since it was started on the 21st of April last. The visitors first inspected the engines and dynamos, and were afterwards taken down the line to the various stations and sheds and back to Paddington station, the whole installation being the most perfect in every detail, and reflecting every credit on the contractors.

Asbestine.*

BY C. C. HELLMERS, JR., ARCHITECT.

MANY if not all of you, gentlemen, received a circular some two months ago, which, if not consigned to that generous receptacle of trade circulars in an architect's office, "the waste basket," informed you of a wonderful new plastic compound, whose extraordinary qualities were described at some length. Very likely such of you as devoted the necessary time to peruse the notice then tossed it aside with the mental remark that another individual had been deluded into the idea that he had made a discovery, and was picturing in his mind the luxurious ease which he was henceforth to enjoy. I confess that such would have been about the experience of that notice in my hands had not a previous acquaintance with the material in its birthplace prepared me to give it a more cordial reception.

There is probably no material in which the present age stands further behind the achievements of antiquity than our limes, cements and plasters, the secrets which they possessed enabling them to build structures in which, as the centuries of time passed by, and sun and weather made their influence felt, the binding material, outlasting the brick and stone, stood forth unharmed from the recessed and weather-worn face of the building, we have so far been unable to discover. It would be useless for me to call any such cases to your mind, as they are too well known to all.

To return to my subject, "Asbestine," so christened on account of the similarity of its fire-resisting properties to asbestos, is a light brown rock, composed principally of silicate of soda, though varying somewhat in its chemical proportions, a deposit of great magnitude of which has been discovered in Lawrence county, New York. This rock, when taken, pulverized and mixed in a pug mill with certain proportions of potash and chemical silicate of soda, forms the cement or plaster, as it is called by its discoverer. Having, as before stated, seen this material immediately after its discovery and during the time the first experiments were being made, I have had ample time to satisfy myself of its virtues, and am so thoroughly convinced thereof that I ventured to occupy your time with a statement of what I have seen.

Its chief virtues are fireproofness, being a most perfect non-conductor; waterproofness, being, when four weeks old, impervious to moisture.

Frostproof.—In regard to this point I would say that the claim originally made for it, that the cement when prepared would not freeze in the coldest weather, has been withdrawn, as it was found on further trials that though this result could be attained, it was at a sacrifice of considerable strength in the material. Though not frostproof in a plastic state, when once hardened the mortar seems to defy the elements, as has been shown by severe laboratory tests, consisting of repeated heating under a blow-pipe and then sudden immersion in cold water, which failed to produce any fractures or flaking in the material.

Adhesiveness.—It has been found that plaster made with this material can be successfully applied to almost any substance—glass, iron, polished wood, pasteboard, etc.—to all of which, after thorough hardening, it adheres with such tenacity that in the case of wood it cannot be removed without raising the grain. The time necessary to thoroughly harden the material is about four weeks, so that it cannot be classed under the quick-setting cements. By saying that it sets in four weeks, I do not mean to say that the chemical action is completed in that time, as such is not the case, but that the ordinary requirements are then fulfilled by it. A sample of plastering on green lath was shown me, where, after the plaster had been on six days, the lath side was exposed to the heat of a stove, causing them to shrink, the plaster, instead of cracking, retained its perfect face, and the movement was confined to the lath themselves, the edges of which, on obtaining a cross section, were seen to have left the sides of the key. Stud partitions and ceilings plastered with this material, either over lath, wire or light corrugated sheet iron, or even on prepared pulp board, are perfectly waterproof.

Here you can see a promising opening for the erection of fireproof buildings, whose weight will be vastly less than that of those now in use, and also the avoidance of one weakness peculiar to all forms of fireproofing, to a greater or less degree, namely, liability of water on one floor to flood another in case of fire, which causes five-eighths of all damage done. Brickwork laid in mortar prepared with this material becomes so completely solidified that it can be safely considered a unit. I have seen hard brick laid as described, subjected to pressure which crushed the brick before the joint gave any evidence of giving.

The uses of the material promise to be very general. It is intended for brickwork, plastering, concrete sidewalks, and I may mention here a possibility of its application to roofs, it being absolutely non-expanding or contracting, and, therefore, applicable to roofs of moderate pitch, where its fireproof nature would be of inestimable value. As a roofing material the repairs, if necessary, would be very simple, the mere floating of a skim coat perfecting a new roof. Professor John W. Norton, of the Massachusetts Institute of Technology, made a report to the president of the Boston Manufacturers' Mutual Fire Insurance Company, in which he said, referring to the liability of woodwork incased with the plaster decaying more rapidly, i. e., facilitating the formation of dry rot: "it is my opinion that when this asbestos plaster is placed upon seasoned wood, the rate of deterioration in the wood is not increased," the idea having been advanced that the chemical action and air-tight covering would produce such results. He further states that "the plaster resists heat and flame in a remarkable degree, and is also a very poor conductor of heat, so that a thin layer furnishes an excellent protection from fire." A backing of corrugated iron showed no tendency to warp when a very intense heat was applied to the face of the plaster.

He then went through the experiment I have spoken of before, of heating a piece of it to a very high temperature and then throwing cold water upon it, and says thereof: "It does not crust or crumble like ordinary plaster, and I consider this a great advantage." His report, as a whole,

recommends the material very highly, and I am sorry I have not got it here, but I loaned it to a party before leaving home.

Regarding the cost which has been suggested to me as one of the most important features in connection with the general usefulness of the material, I would state that it is also within the limit, I might say, of everyone.

As nearly as can be ascertained at present, the manufacture of the material never having been entered into to a large extent, the plastering, including sand and labor, will cost between seven and eight cents a yard per $\frac{1}{4}$ inch coat. Now, if you consider the saving of time and labor which is gained by not having to previously slack your lime, mix your sand, put hair into it, and all the preparatory work which is necessary for the ordinary job of plastering, the difference is very slight. You simply buy your material, have it brought to the building; when ready to plaster, empty your barrels and mix in the sand and are ready to start.

Having the nature of cement it will set more rapidly than ordinary plastering. It will thus be seen that as far as plastering is concerned, the price will not stand in the way.

When used for brickwork the cost will be between two and two and a half dollars per thousand. Now, Portland cement is a little more expensive than that, but, at the same time, the great strength possessed by the asbestos, would make it cheaper than the Portland, even at the same price. The absolute binding of your brickwork, one brick to the other, and the whole wall into one mass, would enable us to reduce the thickness of our walls—not that I want to introduce the fact of the reduction of thickness in walls as an expense-saving medium, but as a saving of space, which for high buildings in narrow lots is often a very valuable consideration. There is another use to which this material can be put, rough cast work in frame houses—being susceptible of receiving any stain desired, and once up it is there forever. You can get any desired color effect, and should it in time become black or darkened a simple washing off will restore its original beauty. Again, where we build small frame houses or outbuildings for factories and sheds, as a substitute for weatherboarding, for corrugated iron, which is ugly, for patent shingles or tin, which are only makeshifts, we can doubtless put more art and study and achieve more satisfactory results with the use of this than of such materials as we now have at hand, and knowing, or believing, rather, that this material was sure to come into general use in the near future, and that my knowledge of it was slightly in advance of that of the gentlemen here present, I have allowed myself to encroach so long on your valuable time.

A Great Office Building.

THE Central Safety Deposit Company of Chicago, represented by Mr. E. C. Waller, is erecting, through architects Burnham & Root, on the southeast corner of Adams and La Salle streets, what will probably result in the largest office building in this country. The ground covered is 167 feet 6 inches on Adams street by 177 feet 8 inches on La Salle street. It will be eleven stories high, and 160 feet to the top of the cornice. Structurally, the exterior is granite for the first two stories, and reddish brown brick and terra-cotta above. The main terra-cotta work will consist of carved panels on the continuous bay windows on both fronts. The general type of ornament is borrowed from East Indian forms without literally following any one example. The piers throughout are rounded from top to bottom, and all of the arches and lintels are formed upon the same radius, brick of special pattern being made for the purpose. Wherever terra-cotta is employed it is designed in small blocks, which are bonded in with the brickwork. The constructional part of the building is thoroughly incombustible, all ironwork performing any constructional purpose being covered with fireproof material, and the floors laid on hollow tile, as usual in large office buildings. Any iron mullions in windows or elsewhere about the building which is exposed serves no constructional purpose. The principal feature of the interior plan is a central court, in which the utmost care is taken to make the most finished effect, as well as produce the greatest possible amount of light. This court is open from the top and is about 75 feet square, with offices facing all around. The walls of the court are English cream-colored glazed enameled brick, with glazed terra-cotta ornamentation. All the wrought iron work in the court is finished by the Bower bath process in golden bronze. The lower portion of the court is roofed over five feet below the second story windows, the space thus enclosed being finished in white marble and plate glass. In the general finish great stress is placed upon the detail and size of the entrances and vestibules. These are finished in polished white marble and onyx. A grand staircase leads to the court gallery, this being finished in the same material. The building has not as yet received its name, though a general suggestion has been made to call it the "Rookery," as the city buildings which were removed to give it place were so called. It will be finished in about two years, and will cost at least \$1,250,000.

THE "Burlington Route," C., B. & Q. R. R., is the only through line with its own track between Chicago, Peoria or St. Louis and Denver, either via Pacific Junction or Kansas City. It is the popular line to Council Bluffs, Omaha, St. Joseph, Atchison and Kansas City. It has unsurpassed equipment, perfect roadbeds, steel tracks, and, at important points, interlocking switches, thus assuring comfort and safety. It traverses the six great states of Illinois, Iowa, Missouri, Nebraska, Kansas, Colorado, with branch lines to their principal cities and towns, and making direct connection at its junction points with all branch trains. It runs from one to three elegantly equipped trains over its own tracks every day in the year between Chicago and Council Bluffs, Omaha, Denver, St. Joseph, Atchison, Kansas City, Dubuque, Sioux City and St. Paul; St. Louis and Rock Island, St. Paul and Omaha; Kansas City and Denver, Omaha, Council Bluffs, St. Paul, Chicago, Des Moines and Indianapolis; Peoria, and Burlington and Kansas City. At each of its eastern and western terminals, it connects in grand union depots with through trains to and from all points in the United States and Canada. It is the principal line to San Francisco, Portland and City of Mexico. For tickets, rates, etc. call on Perceval Lowell, General Passenger Agent, Chicago, Ill.

* Paper read before the second convention Missouri State Association of Architects, January 12, 1886.

Association Notes.

ILLINOIS STATE ARCHITECTURAL ASSOCIATION.

The regular meeting was held on the third instant, President Burnham in the chair.* Among the visitors were Dr. Oscar De Wolf, Mr. W. H. Genung, Dr. J. E. Gilman and Mr. James W. Beach. A short final discussion upon the proposed sanitary law was held by the visitors and members. Mr. Beach, counsel for the health department, submitted the following opinion addressed to the committee on sanitary regulations of the Illinois State Association of Architects:

GENTLEMEN,—I respectfully submit the following in reply to your request for my opinion as to "whether the courts will uphold the constitutionality of a law fixing penalties for violation of regulations and ordinances made after the passage of the law by a board of commissioners appointed by the governor under the provisions of such law."

The proposed act of the general assembly would create a board with power to prescribe, by regulation or ordinance, the duties of the citizen, a violation of which would subject him to fine or imprisonment, or both fine and imprisonment.

The proposed act creating the board of commissioners would in itself be a complete statute, but standing alone it would be *inoperative* so far as it would relate to the proposed penalties, for the reason that said rules and ordinances are to be thereafter created through an attempted delegation of legislative power. If said regulations and ordinances should not be prescribed by said board, then no offense could be committed, and of course no punishment could be meted out, and the main purpose of the act will have failed. On the contrary, if said regulations and ordinances should be established by said board, and, being so established, should require the citizen to perform, or refrain from performing, some act which prior thereto he might lawfully perform or omit to perform at his pleasure, the effect would be the establishing by said board of a rule of conduct for the citizen, in other words, the enacting of a law by a board of commissioners. Such law, if constitutional, would enable a board appointed by the governor to prescribe that *today* the performance of a certain act by the citizen shall constitute a crime, and to prescribe that *tomorrow* the failure of the citizen to perform the same act shall constitute a like (or other) offense. The constitution does not authorize such a delegation of power by the legislature. It has been charged with the duty of enacting laws, and it may define, and punish the commission of crime, but it is not within the province of the general assembly to delegate this power upon it conferred by the constitution.

Judge Cooley in his work on constitutional limitation says: "One of the settled maxims in constitutional law is, that the power conferred upon the legislature to make laws cannot be delegated by that department to any other body or authority. Where the sovereign power of the state has located the authority, there it must remain; and by the constitutional agency alone the laws must be made, until the constitution itself is changed. The power to whose wisdom and patriotism this high prerogative has been intrusted cannot relieve itself of the responsibility by choosing other agencies upon which the power shall be devolved, nor can it substitute the judgment, wisdom and patriotism of any other body for those to which alone the people have seen fit to confide this sovereign trust." (Cooley's Constitutional Limitations, page 117.) "These are the bounds which the trust that is put in them by the society, and the law of God and nature have set to the legislative power of every commonwealth in all forms of government. *Fourthly*, The legislature neither must, nor can, transfer the power of making laws to anybody else, or place it anywhere but where the people have." (Locke on Civil Government, page 142.)

The Supreme Court, in the case of Tugman vs. City of Chicago (78 Ill. Reports, page 411), said (the decision of the case, however, did not turn upon the point): "The legislative power by the constitution of the state is vested in the general assembly. Ordinarily this power cannot be delegated. The right, however, to empower municipal corporations to make by-laws and ordinances for the welfare and government of the inhabitants of the corporation cannot be questioned or denied. It may, however, seriously be questioned whether the legislature has the power to confer the lawmaking power upon a body not chosen or elected by the people, such as a board of health. When the legislature delegates authority to a municipal corporation to enact ordinances, these ordinances are enacted by a board of aldermen or common council chosen or elected directly by the people of the municipality. Thus the people have a direct voice in making the laws by which they are to be governed. But if the legislature possesses the power to provide that some judicial officer of the state may appoint in a city a body of men styled a board of health, and that board can be empowered to make ordinances for the government of the corporation, the people of that corporation may be deprived of self-government. They will be governed by ordinances adopted by a body they had no voice in electing. This would be repugnant to the theory of our government."

In conclusion I would say that I am of the opinion that the proposed law in the terms indicated would not be upheld by the courts, but believe that a law (free from objection on constitutional grounds) can be so framed as to substantially accomplish the end you have in view. Respectfully submitted, JAMES W. BEACH.

The president stated that the matter was entirely in the hands of the committee, with power to take final action, and they will consult with Drs. DeWolf, Gilman and Mr. Genung with this in view.

The subject of party wall purchases was introduced, and the following resolution was presented by W. W. Boyington, seconded by F. Baumann, and passed:

Resolved, That a committee of three be appointed by the chair for the purpose of making an exhaustive report at the next regular meeting upon a uniform basis for the purchase and sale of one-half interest in party walls.

On motion it was decided that the discussion of the report of this committee should be the order of business for the next regular meeting on July 1.

The president appointed as a committee W. W. Boyington, S. M. Randolph and L. H. Sullivan.

Mr. Baumann suggested that a committee be appointed to discuss the subject of a uniform contract and specifications, and the chair referred the matter to the executive committee, calling attention to the fact that a special committee was appointed for the consideration of uniform contracts and specifications at the last meeting of the Western Association of Architects.

* The verbatim report of this important meeting will appear in the intermediate news edition for June.

Correspondence.

NEW YORK CITY, April 6, 1886.

Editors *Inland Architect and Builder*:

Will you kindly inform me through your valuable paper if the plans of the Calumet and Chicago Club buildings were ever published, and when, and in what paper, or where I can get copies of them?

Respectfully yours,

A SUBSCRIBER.

[Perspective drawings of the Chicago Club, by architects Treat & Foltz, were published, we think, several years ago, but we can obtain no definite information regarding the date or the journal. A perspective by Lautrup of the Calumet Club building, architects Burnham & Root, was published in the first number of the *INLAND ARCHITECT*. This drawing, as well as the plans, was destroyed by fire. No plans of either building have been published to our knowledge.—EDITORS *INLAND ARCHITECT*.

COUNCIL BLUFFS, Iowa, May 19, 1886.

Editors *Inland Architect and Builder*:

GENTLEMEN,—I am sorry that I cannot undertake to fill out the blank, but forward you one of our local papers, the *Globe*, in which you will see that our Board of Education have become panic-stricken since the Kansas city disaster.

Now, the Bloomer School building contains the office of superintendent of city schools, which superintendent is an ex-civil engineer. There are also several professors of mathematics and natural science in the building. Yet it never seems to have been thought of, that the building they are afraid to stay in is a material thing, the strength of which can be calculated. The Bloomer School House was commenced in 1880 and finished in 1881. It was built from designs procured upon the competition plan, the advertisement for plans stating the number of rooms and other particulars. After the plans were in, the architects were told that \$18,000 was all that the board could legally expend upon the buildings. All but one left in disgust that this fact had not been stated before. The one who remained guaranteed that his design could be executed for the money. The board went on with the work, which cost nearer \$40,000—just how much, it would be difficult to tell. A grand opening was had, and the public were informed that the architect had misled them as to cost, but as they had such a magnificent, substantial and enduring structure, complaint had not been heard; neither did they expect there would be any dissatisfaction at the cost; and reveling in the glory of this grand achievement the board of directors, architect and contractor had their names cut in a stone in the front of the building that posterity in ages yet to come might know to whom they were indebted for such a noble structure. WM. WARD.

Although the Bloomer School is used as a high school, it is *not* the building they propose lowering 40 feet.

Our Illustrations.

House for J. W. Tomlins, at Arapahoe, Neb., by Alfred Smith, architect, Chicago. Frame, stone foundation; cost about \$5,500.

Office building being erected by the Central Safety Deposit Company of Chicago by Burnham & Root, architects (see description, page 81).

Barn for B. L. Pease, at Oak Park, Ill., by Alfred Smith, architect, Chicago. First story of matched ceiling, second story of redwood shingles.

Competitive drawings for a clock tower, by the Chicago Architectural Sketch Club. "Timepiece" (Harry Lawrie), first prize; "Professional" (Myron G. Holmes), second prize. "Time" was designed by C. O. Frankel.

Chapel for All Saints' Episcopal Cathedral congregation, Omaha, by Mendelssohn & Fisher, architects. The main part is 39 by 125 feet, transept 35 feet wide with 7 foot projection. The lower part of walls will be Sioux Falls stone backed with brick, upper part frame and shingles. Seating capacity, 450. Estimated cost \$12,000.

Frame country residence, by architect B. W. S. Clark, Chicago. Plan covers 41 by 56 feet. The interior is finished in hardwood, with stained glass and plate glass windows, wood mantels, sideboard, etc., also stationary wash basins on first and second floors; large reception hall with stairway leading from first to second floor; one bath room and two closets; heated by steam and grates; total cost \$15,000.

Block of four brick dwellings erected on Walnut Hill, Cincinnati, for the University of Cincinnati, by Geo. W. Rapp, architect, Cincinnati. The dwellings are of Zanesville pressed brick laid in brown mortar, with Malone bluestone trimmings. A novel feature of the front is the overhanging balcony over the central driveway which leads to stables and out-buildings for dwellings. The entire buildings are finished in clear yellow pine, varnished, and each house has nine rooms and laundry, with all modern improvements. The entire cost of the block when completed will be \$22,000.

A WRITER in the hot climate of the East Indies calls attention to the possibility of serious mistake through accepting as correct the school-book statement that sound travels at the rate of 1,093 feet per second. That is its speed at the freezing point of water, or rather at the melting point of ice; but the rapidity of transmission appears to increase about one and three-quarters feet for each degree of temperature. That makes a difference of seventy-five and one-half feet at the temperature of 100° which prevails in India. A shrapnel shell intended to be thrown 1,000 yards, the distance being estimated by sound, would fall seventy-five yards short of the mark aimed at and do no damage. In the shelling of intrenchments at a distance of 4,000 yards the error would amount to about 250 yards, and the result might be to render useless a whole battery of guns.

New Publications.

ARCHITECTURAL STUDIES. Edited by ARCHITECT F. A. WRIGHT. William T. Comstock, publisher, 6 Astor Place, New York.

Of this series, parts I, II, III, and IV are now ready at \$1 a part. Part I is a set of twelve designs for low-cost houses, and includes the prize designs for \$2,500 houses of "Building Competition No. 1." Elevations, plans and details, with specifications, bills of materials, and estimates of cost are given. Besides the prize designs there are given a number of other designs ranging in cost from \$500 to \$4,000. Part II is a set of store fronts and interior details, containing twelve plates of designs and details for the following classes of stores: Drug store, restaurant, village shop, retail 25 ft. store, bank and office, cigar store, corner dry goods store, store front, basement and first story, and others. The designs represent nine architects, and hence there is a variety not usual in works of this character. Part III contains twelve plates of stables suitable for village lots, ranging in cost from \$300 upwards. Exteriors, plans, and some details are shown. Part IV is made up of studies for seaside and southern homes, and gives designs for cheaply built houses with ample veranda room suitable for a warm climate or summer use. With but one or two exceptions these houses will not exceed in cost \$2,000. Judging from the frequent inquiries for just the class of designs furnished by these portfolios, the editor and publisher have struck the popular chord, and the studies will have the large sale to which their merit entitles them.

BUILDERS' WORK AND THE BUILDING TRADES, by COL. H. C. SEDDON, R. E., superintending engineer H. M. dockyard, Portsmouth; examiner in building construction, Science and Art Department, South Kensington; assistant manager H. M. civil service commissioners; late instructor in construction, School of Military Engineering, Chatham. With illustrations. Rivingtons, London. For sale by A. C. McClurg & Co., 117 Wabash Ave., Chicago. Price, \$4.00.

This is an octavo volume of 358 pages, by Col. H. C. Seddon, R. E., late instructor in the school of military engineering at Chatham, England. The author is already quite well known in this country, through his notes on "Building Construction," published some years ago. This present work forms a sort of appendix to the former one. Its contents are arranged in eight chapters, as follows: Excavation and Bricklaying, Masonry, Carpentry, Smith and Foundry Work, Slating, Plastering, Plumbing, and Painting, in which are included glazing and paper-hanging. There follow tables giving experiments with concrete slabs, etc., the strength and deflection of timber, and the thickness of standard wire gauge sizes, also a specification for concrete floors and roofs. The book is written from an English standpoint, of course, and some items, such as the grades and kinds of lumber and other building materials, also the prices for various kinds of work, are inapplicable here. But these form only a very small proportion of its contents, which are in all other respects very practical, interesting and instructive, and particularly valuable to architects, as showing what may perhaps be regarded as the most thorough and substantial methods of building which have been developed among the English government engineers, whose reputation is world-wide. Such matters as the building of hollow walls, damp proof courses, dry areas, the various styles of bond in bricklaying and stone-masonry, scaffolding for heavy jobs, joints in carpentry, builders' hardware, etc., are treated with a completeness which is rare and admirable. The work is profusely illustrated with cuts, which are excellently drawn and printed, are uniformly to a large scale, and add much to the appearance and value of the reading matter. There is also a very complete index at its close. This book will prove invaluable to architectural students and to superintendents generally, and there are few architects who would not be likely to find in its well filled and admirably illustrated pages valuable matter enough to repay several times the very moderate price of the book.

Mosaics.

E. D. MORRIS & COMPANY, agents, have finished the contract for tiling the vestibule, walls and ceiling of the Rialto building. The whole of this work is executed in Josiah Wedgwood & Sons English Art Tiles, of which they are the sole agents.

AMONG the prominent companies lately incorporated under the laws of the state of Illinois is the Harris & Winslow Company, of Chicago; capital stock, \$25,000; to manufacture and deal in artistic architectural constructions of iron, bronze, etc. Incorporators, E. T. Harris, W. H. Winslow, and E. L. Messer.

LOCKWOOD & KIMBELL, the pressed brick dealers, are receiving large importations of English enameled brick. About 200,000 of these brick have been received the past few months, a large proportion of them being contracted for to be used in the office buildings being erected for the Phoenix Insurance and the Central Safety Deposit Companies, of Chicago.

The Boston Terra-Cotta Company is now represented in Chicago by Richard Robbins & Co., at No. 157 La Salle street. The work of this company in the West is increasing, the latest contracts executed by Robbins & Co., being the Jonathan Clark office building, Chicago, and the Northwestern Insurance Company's building, at Milwaukee.

THE use of corrugated iron, for roofing, siding, and ceiling purposes, has been greatly extended of late years, and bids fair to become still more popular. The Cincinnati Corrugating Co., of Cincinnati, O., one of the most reliable and extensive manufacturers of corrugated iron in the country, will send you one of their valuable and well prepared catalogues on receipt of your address.

THE first Bessemer steel converted in the south was made at Chattanooga, Tenn., on April 19, by the South Tredegar works. The experimental cast of two gross tons proved excellent steel under all tests applied. The material used was pig-iron from Cranberry ores, North Carolina, and shows that ore to be excellent steel material. The plant has a capacity of eighty-five tons per day. The success has caused much gratification among southern iron-masters.

SMITH & EGGE MANUFACTURING Co. have contracted with the Board of Trade managers to re-hang all the windows in the large hall with "Giant Metal" chain. They are to make a special chain for this building of extra weight, to be run over their double-balance pulley and patent fixture. The windows range in weight from 400 to 765 pounds, and were originally hung with best $\frac{3}{8}$ in. Italian hemp cord, which was found unequal to the strain.

THE Royal Reversible Sash overcomes all inconveniences and danger in cleaning the outside of windows, and the attention of all parties interested in building, who have a care for the safety of their employes, is called to this valuable improvement. Lord & Eiker, the Chicago agents for the Royal Reversible Sash Company, have a working model at their office, Room 24, Old Chamber of Commerce, and will be pleased to explain the merits of the sash to any one interested.

A. C. HICKEY will place the gasfitting in the new Orpheus opera house at Niagara Falls. He will put in one of his patent sun-burners and a patent gas stand with improved bye-pass cocks, and a complete outfit of stage lights. He is also fitting up the large five-story building to be occupied by the Standard laundry on Meridian street for Joseph Downey; and will also put in ten new water-closets and overhaul the plumbing throughout the Weber Wagon Company's building, at Chicago.

A NEW use to which soft steel is being put is the manufacture of water conductors by the S. S. S. Conductor Company, of Allegheny, Pa., who are now making their expanding water conductor out of soft steel sheets, either galvanized, kalomined or leaded, thereby insuring great toughness and lasting qualities in their pipe, consequently making it the best expanding conductor in the market, as it is the only one made of this material. This conductor is worthy the attention of all architects, builders and metal workers generally.

THE world moves on, inventions and progress still rush together for the benefit of the present generation, but we look back with a feeling of veneration to the art and talent displayed in ancient architecture. In all the modern edifices, of which, we pride ourselves, the striking features are but a reproduction of the thought of the old masters, with the exceptions that we build in a few months buildings that would have taken them years to complete. We are gradually returning to the age of artistic wrought iron, cunning designs in brass, elaborate wood carving and marble tessellated pavements. Acquiring wealth rapidly, we are less inclined to look at the cost of the work so artistic and durable. The old Romans prided themselves on the marble floors of their dwellings, and the proof of their knowledge of its durability is demonstrated by the recent discoveries made in Roman ruins, where the marble mosaic pavement retains its original designs and colors. Of late years, an Italian artist, Mr. Caretti, has introduced this work in some of our new fashioned residences, and a handsome design for the hall of Mr. A. D. Kohn's house is his latest work. Should, in centuries to come, Macaulay's New Zealander be digging in the ruins of Chicago, a marble mosaic pavement may be brought to light, and create a discussion as to whether Chicago was an old Roman city or the creation of a more modern age.

THE Dyckerhoff brand of Portland cement, from the testimonials before us, appears to excel in those qualities which are of the greatest importance in a Portland cement. An extract from the pamphlet recently issued by Mr. E. Thiele, 78 William street, New York, the representative of Messrs. Dyckerhoff & Sons, shows its points of merit. "It is of correct chemical composition, perfectly well burnt and very finely ground. Its unusual fineness is a very important advantage. Its extraordinary and uniform fineness will permit the addition of 25 to 50 per cent more sand than other well known, but generally much coarser, brands of Portland cement. Its slow setting is another advantage of great importance. The hardening proceeds slowly at first but surely, advancing in age. The Dyckerhoff Works have succeeded not only in producing the strongest cement known, but one unalterable in volume, not liable to crack, and of a uniform and never varying quality. It will always produce the most reliable and, by reason of the greater addition of sand, the most economical work." This pamphlet, containing a description and tests of this cement, with full directions for the employment, the preparation and composition of mortar, concrete, artificial stone, will be forwarded free of charge on application to Mr. E. Thiele, 78 William street, New York, or to Messrs. Meacham and Wright, 98 Market street, Chicago, Illinois. It contains a large number of testimonials from architects and builders in high standing throughout the country.

THE attention of our readers is invited in the present issue to the advertisement of Messrs. N. & G. Taylor Co., tin plate and metal dealers, of Philadelphia. This old, reliable firm, established in Philadelphia as far back as 1810, claim they are the originators and sole importers of the celebrated old style brand of double coated or hand dipped roofing tin. In view of the fact that firms who handle brands made in imitation of the old style have made some preposterous claims as to the merits of their respective brands, Messrs. N. & G. Taylor Co. advise us that they have had a careful comparison made, and after a critical test, extending over several months, claim that the old style contains over fifty-six per cent more coating than the numerous imitations or counterfeits of the old style. In justice to Messrs. N. & G. Taylor Co., it should be stated that they claim they originated the idea of stamping the name of the brand on sheets of tin plates, and have followed this custom for a long number of years. They write us that of late certain imitations of the old style are being stamped, in order to mislead the trade, and they call special attention to the fact that the genuine old style brand of roofing is the only brand of roofing tin that is stamped with the name of the firm that guarantees it. They therefore ask encouragement for the genuine old style double-coated roofing tin, and think it should be specified in all contracts where first-class work is required. Messrs. N. & G. Taylor Co. also handle the Westminster redipped by the old method, likewise the Cookley brand guaranteed roofing. They state that they will be glad to send prices, circulars and samples, free of any expense, upon receipt of inquiry. Write to them when in their line, or wanting any information about roofing tin.

A DECIDED advance in the direction of safe and perfect hot-water heating has been made by the introduction of wrought welded boilers of English make by the well-known manufacturers of steam warming apparatus, the Hay & Prentice Company, of Chicago. In regard to hot-water heating for dwellings, quoting from an article by J. Drysdale, M. D., and J. W. Hayward, M. D., published in the *Health and Comfort in House Building*, they say: "As a proof of the healthfulness of hot-water heat, we may notice that one of us, who has lived for four years in a house heated by the hot-water system, is a general practitioner of medicine, which involves being frequently called out at all hours of the day and night, yet no increased liability to cold or delicacy of any kind has been observed; on the contrary, whereas previously, when living in houses warmed by hot air, etc., he frequently suffered from bronchitis and quinsy, he has never had either disease since living in his present house, which is warmed by hot water; and a member of his family, who had to spend the severe winters in a warm climate, is now able to remain at home and go about in the open air all the year round. For prevention of disease we hold such a house to be a most important auxiliary." There is no danger of explosion in hot-water apparatus, as the boiler is open to the atmosphere through the expansion tank and vapor pipe, and when properly constructed operates by gravitation only, no pressure being necessary. The Hay & Prentice Company's apparatus is so constructed that an increase of pressure cannot be produced therein; therefore, the use of safety valves, pressure gauges and other safety appliances is entirely dispensed with, while, as it works by gravitation only, it consumes from 15 to 25 per cent less fuel than either a steam apparatus or a high-pressure, hot-water apparatus, doing equal work. The wrought welded boiler is made of the best quality of boiler iron or steel, as preferred, the plates are solidly welded together, the heads welded into the shells and the flues welded into the heads, making the boiler one mass, strong, compact, without any of the risk of fracture so common to cast boilers. In the operation of greenhouses these boilers are especially adaptable, and the variety of sizes enables the householder to conveniently warm a conservatory attached to the house, however small, and always with safety and at small expense, a fact that will materially aid in popularizing these hot-water heaters. Architects have so much to do with the health of their clients, as well as the direction of their purchase of proper apparatus, that they would do well for them and for themselves to become thoroughly conversant with the many points of excellence incorporated in this boiler and the Hay & Prentice system of hot-water heating.

THE Perth Amboy Terra-Cotta Company have issued an illustrated circular giving sketches of panel, frieze, and gargoyle work in their terra-cotta, and in which they set forth modestly and plainly the following facts regarding their company incident to the execution of the best class of terra-cotta work, for which that company have become deservedly popular and famous. The circular says: "The credit for the introduction of architectural terra-cotta in this country belongs to the Perth Amboy Terra-Cotta Company, and all those interested in artistic and durable buildings are indebted to it for the many advantages which this material affords for the production of the best architectural results for a moderate expenditure of money. Previous to the organization of this company many attempts were made to manufacture architectural terra-cotta, but they were uniformly unsuccessful, and no company manufacturing terra-cotta in this country previous to the organization of the Perth Amboy Terra-Cotta Company is today in existence. In the manufacture of a material like terra-cotta, requiring, as it does, the greatest skill, the experience gained by each year's work is of inestimable advantage; and while the early work of this company would still be considered creditable, and was an immense advance over any work previously made, yet its production was attended by considerable uncertainty, and the amount of work considered up to the standard for shipment hardly equaled the amount consigned to the dumping-ground. This, of course, resulted in delays, which were very annoying at the time, and unfortunately implanted the belief in many minds that delay was inseparable from the use of the material. This is not, however, a fact at the present time. Profiting by past experience, the Perth Amboy Terra-Cotta Company is now enabled to produce work of perfectly uniform quality, and with absolute certainty of results. The terra-cotta manufactured by this company is universally admitted to be superior to any other terra-cotta manufactured in this country or in Europe, and is the standard to which all other terra cotta is compared. The exceedingly large amount of business done by this company enables it to employ men of special ability to superintend the various branches of work, and architects can send small scale drawings with the assurance that they will be properly interpreted by skillful and intelligent draughtsmen and artists. With its extensive works, covering seven acres of ground, its perfectly trained workmen, and its systematic methods of making work, it is enabled to handle contracts of any magnitude with ease and dispatch; and, in instructing work to it purchasers insure themselves not only of having the best terra cotta, but of prompt fulfillment of contracts." The circular also gives the names, location and architects of a few of the more prominent of thirty-five hundred buildings in the decoration of which Perth Amboy terra-cotta has been used.

PUBLISHERS DEPARTMENT.

Architectural Iron Contracts.

THE almost universal use of fireproof material, together with the demand for the greatest strength in construction at the expense of the smallest possible amount of room and light in the construction of large office buildings, has made this industry rank with that of the steel rail manufactures in this country. The variety of the forms of iron, both cast and wrought, called for, together with the immense amount of the material used, has led to the establishment of mammoth plants that are devoted entirely to this manufacture. An example of this may be found in the construction of the great office building for the Central Safety Deposit Company, illustrated in this number, for which the Dearborn Foundry Company are supplying the ironwork. With the exception of

the several tiers of brick vaults, the entire interior construction is made of columns of cast iron, upon which rest wrought iron girders and beams, the entire structure bolted securely into one mass, and consuming over four thousand tons of material. The manipulation of such a plant as that of the Dearborn Foundry Company requires, beside the large number of foundry men, a special force of engineers, mechanical draughtsmen and designers skilled in the special work of estimating upon each special part in the whole structure. The Dearborn Foundry Company also furnished the iron for the Home Insurance building, recently completed, these two buildings, with perhaps one or two exceptions, representing in the aggregate the largest quantity of architectural ironwork yet furnished in the West.

To the architect belongs the credit for the design of the building, to the contractor the credit for faithfully carrying out the plans, but in large structures, where immense blocks of stone or granite, heavy iron girders and columns are used, a special demand has been created for competent men, possessing the practical knowledge and necessary plant to handle and carefully adjust the various parts of the structure. In many of the large office buildings lately erected in Chicago, the heavy granite columns and solid masses of rock, and the ponderous ironwork, has made this work an important adjunct to a construction. The firm of McBeath & Rowe seem to have acquired a monopoly in this line of business, for among the lately erected buildings in which they have had contracts for either stone or iron setting, may be noticed the Home Insurance, Royal Insurance, Studebaker, Rialto, Phoenix buildings, the Art Institute and also the Central Safety Deposit Company, illustrated in this number.

Chicago Anderson Pressed Brick.

THE contract for 400,000 of this company's special Brown Opsidian pressed brick for the office building for the Central Safety Deposit Company, illustrated in this number, calls for some special mention in regard to pressed brick work in general, and the product of this company in particular. When the Chicago Anderson pressed brick company first commenced the production of pressed brick, very little of this material was known to Chicago, but the fronts of a few fine residences attracted attention to pressed brick as an elegant and substantial substitute for stone and common brick. The building of the Calumet Club building from Chicago Anderson brick, marking the commencement of a period of pressed brick building, which, from a fashion, grew into a permanent style. If this transition from stone to brick building had depended upon the regular pressed brick alone, the ornamental quality of stone would have again brought that material into popular favor, but the special designs in molded brick exhibited in the Calumet Club building demonstrated that there was a much more beautiful and tractable material which would lend itself to an infinite variety of architectural styles with but little additional cost to the builder. Then followed a general adoption of these bricks, not only in Chicago, but throughout the West—the immense works of the Chicago Anderson Company being taxed to their utmost to supply brick that, beautiful in color, firm in texture, for geometrical accuracy and equality of shade have never been equaled, while the molded brick produced presented such a variety in design that the public soon spoke of this company as the representatives of the pressed brick in the West. The brick to be used in the Central Safety Deposit Company's building are specially designed for this company, and will present, when done, not only marked contrast with the red fronts surrounding it, but one of the most novel and elegant exteriors in the country.

Stone and Brick Preservation.

THE American Stone and Brick Preserving Co. seems to be growing in popular favor in the protection of building walls in this city, as is evidenced by many of the prominent buildings treated by their process during the past year, among which are the Lakeside building, Reaper block, the northwest corner of Fifth avenue and Monroe street, Mason's building, Nos. 168 and 170 Washington street, and the Link Belt Machinery Co's building, Nos. 11 to 23 South Jefferson street. The company is now at work applying their preserving compounds to the decaying stone work of the Cook county hospital, and has secured the contract to treat and preserve our crumbling court house. The Lundberg process, as used by this company, is indorsed by prominent business and scientific men, and its durability established by the test of time, as shown by one large stone in the south wall of the Government building in this city, treated nine years ago, under direction of Gen. J. Adair McDowell, which today is in sound state of preservation. The American Stone and Brick Preserving Co. will guarantee that building walls treated by their process will remain in a sound state of preservation for at least ten years, and claim as follows: 1. That white incrustation on brick walls can be removed and prevented, and the walls water-proofed and preserved, with or without changing the original color of the brick. 2. New building walls can be water-proofed and preserved without in the least changing their natural color. 3. Old building walls can be restored, water-proofed and preserved, with or without materially changing the original color of the stone or brick, or colored to suit the owner. The American Stone and Brick Preserving Co. has recently entered into a contract for a term of years with John L. Stuart, a prominent contractor and builder of St. Louis, as their agent, whereby he represents them in that city.

ARCHITECTS JOHN W. ROOT and S. S. Beman, of Chicago, will spend the summer in Europe. No two architects in this country have worked harder for the past seven years, and none are better known to European architects than these. Beside Mr. Root's fame as an architect, as Secretary of the Western Association of Architects, and an honorary member of the Art Institute, he will meet with a cordial reception from European architects, while as a special contributor to the INLAND ARCHITECT, our readers may expect valuable contributions on his return. As architect of Pullman, a cordial reception will also be accorded to Mr. Beman. Mr. Root sails on the 12th, and Mr. Beman on the 17th instant. We wish them bon voyage.

Synopsis of Building News.

Akron, Ohio.—Architects Weary & Kramer report: Business continues very dull. For Muller Match Co., two-story brick factory building.

Allegheny, Pa.—Architects Barr & McBride, of Pittsburgh, report: For H. W. Graeb, two-story frame dwelling, 30 by 60 feet; cost \$4,000; H. C. Oakley, builder. For Wm. Gallagher, two-story frame, 20 by 32 feet; cost \$2,000; under way; Wm. Granger, builder.

Ashland, Ohio.—Architects Weary & Kramer, of Akron, report: For H. F. Vantilburgh, brick business block.

Austin, Tex.—Architects Wahrenberger & Beckmann, of San Antonio, report: For John H. Houghton, two-story pressed brick residence, 58 by 71 feet, cut stone and granite trimmings, slate roof; cost \$16,000; under way; Chas. Funk, builder.

Battle Creek, Mich.—Architect A. Druiding, of Chicago, reports: Additions to St. Philip Catholic church, slate roof, galvanized iron cornice; cost \$3,500.

Belvidere, Ill.—Architect A. Druiding, of Chicago, reports: Catholic church, 48 by 103 feet, frame, stone basement, stained glass, shingle roof, heated by furnace; cost \$7,200.

Beatrice, Neb.—Architect F. M. Ellis, of Omaha, reports: Brick and stone M. E. church building, 60 by 120 feet; cost \$20,000; nearly finished. Six two-story and basement brick store buildings, 167 by 90 feet, plate glass fronts; cost \$40,000; two stores soon to be finished; plans on the boards for the other four. For Geo. R. Scott, brick and frame residence, 40 by 56 feet, cost \$7,000; plans not yet completed.

Beaver, Pa.—Architects Barr & McBride, of Pittsburgh, report: For Hon. F. H. Agnew, two-story brick and frame dwelling, 30 by 85 feet; cost \$9,000; under way. For H. M. Myers, two-story frame dwelling, 65 by 80 feet; cost \$15,000; plans under way; Harold & McDonald, of Pittsburgh, builders.

Cadiz, Ohio.—Architect Chas. P. Hamilton, of Wheeling, W. Va., reports: For W. B. Wood, two-story brick dwelling, 38 by 55 feet; cost \$3,000; projected. Harrison National Bank building, cost \$12,000, and W. B. Hearn's two-story brick residence, cost \$4,000, previously reported, are under way.

Canon City, Colo.—There are numerous small dwellings ranging from \$600 to \$2,000 being built, and on the whole Canon City is having quite a building "boom."

Architect Geo. W. Roe reports: For Fremont county, two-story and basement brick court house, 61 by 72 feet, stone trimmings, an elaborate clock tower; cost \$20,000; under way; Roe & Lill, builders. For Stebbins & Denwoody, "St. Cloud" Hotel, four-story brick, 64 by 120 feet, cut stone trimmings, mansard roof; cost \$22,000; nearly completed; Franz Sell, builder. For D. G. Peabody, two-story brick apartment building, 42 by 88 feet, stone trimmings; cost \$10,000; just commenced; G. W. Roe, builder.

Centre Point, Neb.—Architect F. M. Ellis, of Omaha, reports: For First National Bank, two-story and basement bank building, 22 by 65 feet; cost \$6,000; plans under way. For Hon. J. C. Crawford, two-story and basement building, 22 by 50 feet; cost \$6,000; plans under way. For Lee & Clumbback, two-story and basement store building, 22 by 38 feet; cost \$5,000; plans under way.

Chattanooga, Tenn.—Architects Adams Bros. report: Outlook for building good. Strike has but little or no effect on the building lines. We have the following work in hand: For Freedman's Aid Society, four-story university building, 156 by 115 feet, at New Orleans, La. Also frame residence at Atlanta, Ga. Also brick residence here to cost \$10,000; the first is under way, and plans are being completed for the latter two. For John Nicklins, brick residence, cost \$5,000; preparing plans. For D. B. Loveman & Co., brick store building, 60 by 243 feet; cost \$50,000; roof on; D. J. Chandler, builder. For G. W. Wheeland, brick residence, 56 by 76 feet; cost \$10,000; preparing plans. For H. Clay Evans, two-frame cottages, 32 by 35 feet each, cost, \$1,500; preparing plans. The above items were erroneously credited to Knoxville, Tenn., in our April issue.

Chicago.—The almost complete stagnation which describes the building situation for the past month continues but with hope of permanent revival within a few weeks. While the agitation of the trades unions in favor of shorter hours and increased pay was the cause which brought on this condition, the continuance is mainly due to the fact that owners have as yet received no assurance that they can order work resumed without further interference. This scarcity of work has made labor cheap and will tend to make it cheaper throughout the remainder of the year.

Brief synopsis of the proceedings of the different associations of master builders will show the direction their efforts have taken, and also what has been forced upon them by the combinations of employes. The carpenters soon found that their men were generally anxious to work ten hours, but were, in a large measure, influenced by the other unions, and it might be said here, that the contractors generally are in sympathy with the men, and mainly advocate a ten-hour day, knowing that they cannot afford to work for eight hours' pay.

The association of master carpenters and manufacturers of wood building materials, which represents the employment of two-thirds of the best workmen in the city, held a meeting and appointed a committee to meet committees from the other builders' associations. At that meeting the painters, plumbers, steam heat, carpenters, galvanized iron and mill men were represented, and after fully discussing the subject, passed a resolution recommending the associations they represented to declare that after June 1 ten hours should constitute a day's work. This was followed by a meeting of the master carpenters and mill men, who, on finding that a large majority were working ten hours with little or no trouble, passed the following resolution:

WHEREAS, The eight-hour movement has proved a failure, and

WHEREAS, We, the master carpenters and manufacturers of Chicago, consider it to be for the best interests of our employes as well as of ourselves, our interests being identical;

Resolved, That after June 1 ten hours shall constitute a day's work.

This was followed by the regular meeting upon June 1, when the following resolution was passed:

Resolved, That a circular be prepared for the signature of all members of this Association, pledging themselves to sustain ten hours as a day's work, and that said circular shall be presented to all master carpenters and mill contractors for their respective signatures as pledges, and that a committee of six be appointed to obtain said pledges.

The paper circulated was headed as follows, with the resolution passed at the previous meeting:

We, the undersigned carpenter contractors and mill men of Chicago, indorse the following resolution, and hereby pledge ourselves to employ none but those who will work ten hours, and we declare that ten hours shall hereafter constitute a day's work according to the resolution.

The latter action was made necessary to insure a uniformity of action and was signed by most of the carpenter contractors and mill men.

The steam heat men also combined in the same way and, while their old men in a majority were "out," they had no trouble in finding all the men they required to fill their places.

The master painters' association decided to work eight hours before May 1, and the men generally objected, so that little trouble was experienced when they decided to work ten hours after a month's trial.

This was largely true of the galvanized iron men also.

The plumbers are still working eight hours, the majority of the association being afraid to risk any controversy with the plumbers' union, and rather inclined, to allow it to dictate in every way they see fit. A prominent member of the association, and one who employs more hands than any other, had all his men strike because some non-union steamfitters were working on the same building. Though he said he would go out of business before he would be dictated to by his men, he finally, much to the surprise of his associates, accepted the terms made by the men. But for this the plumbers would in all probability be working ten hours.

The bricklayers have a strong union, exceptionally well managed, but they are beginning to see that eight hours is a failure, and while no action has been taken by the master masons' association, they will probably vote to go back to ten hours.

The iron men and metal workers are all working ten hours. In fact, there is so little work being done, that workmen generally see that it is more for their interest than their employers' to work ten hours, and when work is generally resumed it will be upon that basis, unless strong influences from agitators who have not the good of the workmen at heart prevails, and in that event all work will stop permanently, except such as must go on at any expense.

There is a large surplus of residences vacant in the city, but this is as much due to the extraordinary exodus of all classes of people to the suburbs as to the decreased demand.

Architect Henry T. Kley reports: For Gilbert Olson, four-story store and dwelling, St. Louis pressed brick, terra-cotta and Lemont stone trimmings; cost \$12,000; plans under way; contract not let. For Gustav Hansen, three-story and basement, pressed brick front warehouse, 48 by 59 feet; cost \$8,000; W. Meyne, mason; John Stuit, carpenter. For E. G. Uihlein, four-story and basement store and boarding house, 25 by 85 feet, two fronts of St. Louis pressed brick, stone and terra-cotta trimmings; cost \$11,000; contract not let. For F. Herhold & Co., five-story and basement chair factory building, 116 by 116 feet, projected. For F. Robinson, three-story and basement, store and flats, 25 by 65 feet, St. Louis pressed brick, terra-cotta and stone trimmings, galvanized iron bays, etc.; cost \$8,000; projected.

Architect B. W. S. Clark reports: For John Maloney, three-story store and flat building, 24 by 70 feet, on West Van Buren street, pressed brick and terra-cotta; cost \$7,000; contract not let. For H. H. Graham, three-story flat building, 24 by 70 feet, at 439 Dearborn avenue, pressed brick, stone trimmings; cost \$7,000; Wm. Dunning, contractor. For F. J. Eulette, two-story and basement frame residence, 32 by 49 feet, in Englewood; cost \$5,000; contract not let. For F. B. Wyckoff, two-story attic and basement frame residence, 32 by 50 feet, at Englewood; cost \$5,000. For Mr. Claus, block of three three-story stores and flats, 75 by 70 feet, at Englewood, pressed brick and terra-cotta; cost \$20,000.

Architects Osling & Borgeois report: For J. J. Salon, three-story and basement stores, stable and flats, 49 by 70 feet, on southeast corner of Market street and Chicago avenue, pressed brick with stone trimmings; cost \$10,000. For N. N. Thom, two two-story and basement and attic dwellings, 50 by 56 feet, on Belmont avenue, pressed brick with stone trimmings; cost \$10,000. For V. Johnson, two-story and attic frame apartment building, 22 by 27 feet, on Abbott court; cost \$3,000. For C. Williams, on Clark street, near Wrightwood avenue, one-story and basement and attic frame residence, 60 by 80 feet, in Oriental style, on the first floor are reception room, 24 by 27 feet, parlor 20 by 20 feet, dining-room, 16 by 24 feet, billiard room, family room, two chambers, two bathrooms, conservatory, two halls, butler's pantry and all modern conveniences; four large chambers are in the attic, in the basement is the kitchen, laundry, servants' room, gymnasium, ice house, furnace-room, coal bins, etc. The building will be finished in hard-wood; cost \$12,000.

Architects Treat & Foltz are preparing plans for J. Q. Adams for a six-story and basement building, 80 by 171 feet, to be built of pressed brick, trimmed with stone; the building is to replace the one recently destroyed by fire at corner of Wabash avenue and Congress street; cost \$130,000.

Architects Burnham & Root report: Plans prepared for Catholic church, 80 by 150 feet, brick, stone trimmings, to be erected at the corner of 43d street and Wentworth avenue; cost \$200,000; contracts not let.

Architect C. L. Siles reports: For Mrs. P. L. Shuman, three-story dwelling, 29 by 72 feet, to be built of stone, copper bays, two closets and baths, stained glass, slate and tin roof, copper cornice, hardwood finish, electric bells, wood mantels, steam heat, also stable, to be erected on Astor, north of Division street; cost \$15,000.

Architect Alfred Smith reports: For Chas. G. Haddock, three-story and basement stores and flats, 25 by 100 feet, at 314 W. Madison street, brick, terra-cotta trimmings, iron channels and beams, galvanized iron cornice, four closets and baths, stained glass, three skylights, electric bells and speaking tubes, wood mantels, felt roof; cost \$15,000; to be commenced at once.

Architect H. R. Wilson reports: For W. H. Maple, three two-story and basement dwellings, 50 by 60 feet, brick, stone trimmings, felt roof, galvanized iron cornices, stained glass, six closets, three baths, steam or hot air heat, electric bells, speaking tubes, nine wood mantels; cost \$12,000; to be commenced at once. For Geo. C. Watts, three two-story and basement stores and flats, 44 by 80 feet, Van Buren street near Hermitage avenue, St. Louis pressed brick, terra-cotta and brownstone trimmings, galvanized iron cornices and bays, iron channels, beams, etc., red slate roof, two skylights, four closets and baths, electric bells and speaking tubes, four wood mantels; cost \$15,000; to be commenced at once. For John Martin, two-story and basement stores and flats, 44 by 80 feet, Indiana near Lincoln street, St. Louis pressed brick, terra-cotta and brownstone trimmings, galvanized iron cornice and bay, iron channels, beams, etc., slate roof, skylights, two closets and baths, electric bells and speaking tubes, two wood mantels; cost \$5,000; to be commenced at once. A five-story and basement store and flat building, 96 by 140 feet, corner of Garfield and Lincoln avenues, pressed brick, brownstone and terra-cotta trimmings, slate roof, galvanized iron cornices, iron channels, beams, etc., hardwood finish, tiling, twenty closets and baths, stained glass, three skylights, electric bells and speaking tubes, mantels, steam heat, cost \$40,000; to be commenced at once.

Architect A. Geo. Beaudry, with Gregory Vigeant, reports: For Jos. Chalfoux, two-story and basement flat building, 25 by 60 feet, on Vernon Park place, brick, stone trimmings, galvanized iron cornices, felt roof, three closets and baths, stained glass, three wood mantels, speaking tubes; cost \$5,000; to be built at once.

Architect Fred Ahlschlager reports: For Theo. Schwarz, two-story and basement frame residence, 37 by 51 feet, at Normal Park, Englewood, stone basement, shingle roof, hardwood finish, furnace heat, closets and bath, electric bells and speaking tubes, marble mantels, dumb waiter; cost \$5,000; to be built at once. For Henry Schumacher remodeling hall building, Forty-seventh street and Ashland avenue, iron work, closets, skylights, felt roof, also stable; commenced June 1.

Architect Chas. E. Kaufmann reports: For Edward Fain, two-story and cellar residence, 21 by 60 feet, Indiana pressed brick, cut stone trimmings, galvanized iron cornice, closets and bath, marble mantels, composition roof; cost \$4,000; to be commenced June 1.

Architect J. H. Carpenter reports: The six-story and basement office and manufacturing building for Jno. B. Jeffery will be started at once. It will be 40 by 93 feet, Third avenue and Van Buren street, pressed brick, granite trimmings, iron channels, beams, etc., galvanized iron cornice, composition roof, fire-proofed, passenger and freight elevators, hardwood finish and tiling, closets, stained glass, electric bells, speaking tubes, wood mantels, steam heat and power, electric lights; cost \$50,000.

Architects J. M. Van Osdel & Co. report: For L. Silverman, five-story factory, 75 by 100 feet, on Gresham street, brick, stone trimmings, felt roof, fire-proof stairway and elevator shaft, fire escapes, heat and power, one freight elevator, three closets; A. Lanquist, general contractor; to be built at once.

Architect C. Hine reports: For Thomas Moulding, three-story and basement brick residence, 20 by 44 feet, on North Clark street near Webster avenue, galvanized iron cornice, composition roof, hardwood finish, furnace heat, closets and bath, skylights, stained glass, three marble mantels; cost \$5,000; Wm. Thompson, general contractor; foundations under way. For E. G. Scheckler, two-story and basement flat building, 21 by 42 feet, on Webster avenue, brick, stone trimmings, composition roof, galvanized iron cornices, closets and bath, stained glass, furnace heat, three wood mantels, skylights; cost \$3,300; to be commenced at once. For Mr. Austin, three-story flat building, 22 by 55 feet, Lincoln near Fullerton avenue, pressed brick, stone trimmings, composition roof, galvanized iron cornice, skylights, closets and bath, stained glass, three mantels; estimated cost \$4,000; to be commenced at once. For Wm. Duffel, two-story and basement flat building, 22 by 55 feet, on Lincoln avenue, brick, stone trimmings; Wm. Duffel, builder; building approaching completion.

Architect J. Otter reports: For G. Nelson, three-story and basement flat building, 62 by 26 feet, corner Elm and Townsend streets, brick, Carbonade brownstone trimmings, galvanized iron cornices, felt roof, three closets, six marble mantels; cost \$7,000; under way; A. W. Ostrand & Co., masons; Ekland & Co., carpenters.

Architect H. Sierks reports: For Misses Shumway, of Philadelphia, Pa., two three-story dwellings, 50 by 60 feet, at 265-267 Wells street, St. Louis pressed brick, Lake Superior brownstone trimmings, galvanized iron cornices, iron beams, channels, etc., composition roof, hardwood finish, four closets and baths, stained glass, skylights, electric bells, four marble mantels; cost \$15,000; under way; Rossler & Winkler, masons; C. Thieman, carpenter. For same, five-story brick warehouse, 80 by 90 feet, on North Water street, galvanized iron cornice, two freight elevators; cost \$20,000; under way; Rossler & Winkler, masons; F. P. Nelson, carpenter.

Cincinnati, Ohio.—Reported by Mr. L. Mendenhall: The building business in Cincinnati, as in other cities, was affected by the strikes, but is gradually settling down to its old basis as to hours of labor and prices paid. The unsettled condition has had, however, the effect of arresting for the present the unusually strong tide of improvement which was flowing in upon Cincinnati. Our architects have their time well occupied, not so much in designing new plans as in finishing plans commenced before the strikes began. They will, perhaps, when matters have been adjusted, have more time to give to the preparation of designs, giving, if possible, more satisfaction to their clients than ever before. The social events, as it were, in architectural and building circles within the past few weeks, were the dedication of the Art Museum and the Lincoln club building, both to stand as monuments to the genius and skill of the architect and contractor. Bids for the new Chamber of Commerce were opened last week, but through the courtesy of the board of real estate managers the request of our Builders' Exchange was granted, in the letting of each branch separately, and the bids set aside. On May 25 the following bids for the tearing down, excavation and masonry were opened, but at the time of this letter nothing

was settled: Patrick Murray, Cincinnati, \$33,281; John Sperry & Co., Cincinnati, \$59,000; H. Meiners & Son, Cincinnati, \$53,360; J. H. Finnigan & Co., Cincinnati, \$34,800; Norcross Bros., Boston, \$33,500. The contract will no doubt be let in a few days, and when once signed work will be actively pushed to completion.

H. E. Sier and W. W. Franklin, of Cincinnati, both architects of undoubted ability, have opened a branch office in Lexington, Ky. They will prove a valuable acquisition to the latter city, dividing their time between here and Lexington.

Architect H. E. Sier reports: For Gen. Michael Ryan, a stone residence on Walnut Hills. For Chas. Fleischman, Esq., a double frame house, slate roof, hardwood finish, etc.; cost \$10,000. For the same party, a single frame house, slate roof, plain finish, costing \$5,000. For Benj. Hey, Esq., a city dwelling, stone front, tin roof, and well finished throughout; cost \$10,000. For Eugene Zimmerman, Esq., a double house, first story built of brick and stone, second story of frame, slate roof; cost \$17,000. For same party, a double frame house, costing \$10,000. A stone chapel, slate roof, etc., for the Episcopal congregation at Winton Place, city.

Architect E. Anderson reports: Additions to Highland county, Ohio, infirmary, consisting of lunatic ward of twenty-six cells, power house, laundry and bakery. For Amos Shinkle, Esq., Covington, Ky., a brick residence of ten rooms.

Architects Des Jardins & Hayward report: Brick dwelling, for John H. Laws; cost \$12,000; brick dwelling for B. W. Putnam; cost \$15,000. Just let contract for a frame dwelling for C. W. Brenneeman, Avondale; cost \$6,000. Four brick dwellings for B. W. Bepner, Mt. Auburn; cost \$15,000. Large brick tenement, for Jos. L. Anderson; cost \$35,000. Contract let for W. W. Watts' dwelling, Richmond, Ky.; cost \$35,000. Odd Fellows Hall, Washington, Ind.; brick; cost \$20,000. Four brick stores for Thomas Gibson, Somerset, Ky.; cost \$12,000. Brick dwelling for D. C. Collins, to be erected near Ludlow, Ky.; stone trimmings; cost \$10,000. Dwelling at Hardinsburg, Ind.; dwellings at Mt. Sterling and Frankfort, Ky.; two dwellings in Lawrenceburg, Ind., and remodeling two dwellings in Norwood. Time well employed.

Architect Edwin Buddemeyer reports: Five-story store, on Central avenue, for Avery estate; frame dwelling for Edward Bultman, Ashland avenue and Cypress street, Walnut Hills; row of eight three-story brick dwellings, to be erected on Denman street, for Briggs Swift; restaurant and hotel, Sycamore and Yeatman streets, for B. B. Whitman; frame dwelling for Charles Jones, Bond Hill, and frame dwelling for James Broderick, to be erected in Cumminsville.

Architect Emil G. Rueckert reports: Five-story brick, for C. Ahrens Manufacturing Co.; cost \$14,000. Frame dwelling for Chas. Ruthwein, to be erected in Hartwell; to cost \$4,000. Two and a half story pressed brick dwelling, for Mrs. Koerbitz, to be erected on Walnut Hills; to cost \$7,500. Opera house, brick, for Manchester, Ohio, 70 by 100 feet; cost \$5,500. Two and a half story pressed brick, for Alexis Damsont, to be erected; to cost \$4,500. Three and a half story brick tenement, for Mrs. Maria Bretnier; cost \$14,500. Two and a half story frame dwelling, for Fred. Dunkar, Mt. Auburn; cost \$3,000. Four and a half story brick store and flat, for Chris. Stallmier; cost \$7,000. Three and a half story brick tenement, for Mrs. Louisa Clausheide; cost \$7,500. Store and flat for Leo Beiker; cost \$7,200. Brick factory for Deitz, Will & Co.; cost \$7,000. Two and a half story brick dwelling, for Edward Schreiffer, Wheeler street; cost \$3,500, and remodeling brick dwelling for H. Steinmeyer; to cost \$3,000.

Architect Gustave W. Drach has removed his office from Walnut and Court streets to Lincoln's Inn Court building. He reports: Frame dwelling, for Jno. Herwig; to cost \$4,500. School house at Warsaw, Ohio, brick; to cost \$12,000. Three-story brick art pottery, Eighth and Lock streets; to cost \$8,000. Dwelling for Thomas Asbury; to cost \$4,500. Frame dwelling, Mason, Ohio, to cost \$3,000, and three brick, stone and frame dwellings, for Mrs. D. H. Mears; cost \$13,000.

Architect Samuel Hannaford reports: For W. H. Blymeyer, Esq., a stone office building, eight stories high, tin roof, etc.; contracts not let. Remodeling the Mitchell building, which adjoins the Chamber of Commerce, into an eight-story office building, with all modern improvements. Addition to convent on Baum street, consisting of dormitories, refectory, laundry and school rooms. Brick dwelling for Jos. Pritz, Esq., containing ten rooms, with hardwood finish and slate roof.

Architect W. W. Franklin, Glenn Building, reports the following: Making plans for public school house, Newport, Ky.; to cost \$16,000. For Capt. G. W. Neare, brick dwelling; cost \$10,000, and frame dwelling for Judge Price, Avondale.

Mr. Lonsdale Green, a graduate of the Institute of Technology, in Boston, and until recently with Samuel Hannaford, has opened an office at No. 5 West Fourth street. He has the following work under way: Presbyterian church, Cumminsville; cost \$15,000. Frame residence for W. H. Sutherland, Wyoming, Ohio; cost \$4,000. Frame residences for Geo. E. Henshaw, Miss Bauer and Thos. Forbes, College Hill, Ohio, costing respectively \$3,000, \$2,500, and \$1,800. Plans are being made for country residence for Fred. Koehler, Esq., Mt. Washington, Ohio, costing \$6,000, and the new Hamilton county morgue, to cost \$18,000. This latter building when finished will be more complete than anything of its kind in the country. Special apparatus and appliances are used, by which means bodies after post mortem examinations are kept in glass cases at a temperature from 20° to 40°, thus preserving them for months at a time if need be, and immediately arresting decomposition.

Columbus, Wis.—Architect A. Gruinding, of Chicago, reports: Stone Catholic Church building, stained glass, slate roof, galvanized iron cornice; cost \$5,000.

Creighton, Neb.—Architect N. L. Raymond reports: Present outlook good; have several small jobs ranging from \$500 to \$1,200 under way, and considerable work is expected.

Des Moines, Iowa.—Architect W. L. Plack reports: Outlook very doubtful, but the indications point to quite a lot of residence work. How much of it will be executed is very uncertain. Have under way, for Geo. W. Baker, remodeling brick residence, 34 by 34 feet; cost \$3,600; Jas. Garrity, builder. For E. B. Whitcomb, frame cottage, 33 by 52 feet; cost \$3,200; under way; Roberts & Smith, builders.

Detroit, Mich.—The present shows considerable building going on, but new work has been very backward this month, though we believe matters have commenced to improve and look for some of the promised activity of this month in June. Permits were issued during April for new buildings to cost \$353,140. Alterations, etc., to cost \$29,150. Total, \$382,290.

Architects Wm. Scott & Co. report: For Detroit Stone Works, three-story brick, pattern shop, 126 by 40 feet; cost \$15,000; Henry Carew, builder. For Detroit Electrical Works, two-story brick shop, 50 by 48 feet; cost \$5,000; Henry Carew, builder. For L. B. King, two-story brick dwelling, 32 by 70 feet, stone trimmings, slate roof; cost \$11,000; Henry Carew, builder.

Architect E. F. Meyers & Son report: For Chas. Campon, two-story brick store and dwelling, 20 by 60 feet, gravel roof; cost \$3,000; Martin Scholl & Sons, builders.

Geo. E. Depew is building for himself two two-story frame dwellings, each 28 by 58 feet; cost \$5,600.

Architect A. C. Varney reports: For Wm. S. Crawford, two-story brick dwelling, 38 by 67 feet, stone trimmings, slate roof; cost \$8,000. For S. J. Hober, two-story brick store and dwelling, 35 by 60 feet, stone trimmings, slate roof; cost \$6,000; F. Scheibner, mason; Thos. Pinney, carpenter. For Mrs. Maxwell, two-story double brick dwelling, 42 by 64 feet, stone trimmings, slate roof; cost \$7,000. For Wm. Rickey, two-story double dwelling, 44 by 60 feet, frame; cost \$4,000. For Benj. Johnston, two-story brick and frame dwelling, 24 by 42 feet; cost \$2,500.

Architects Wm. Scott & Co. report: For Hiram Walker, fine two-story brick dwelling, 24 by 70 feet, stone trimmings, gravel roof; cost \$18,000; G. W. Buffum, mason; Palmer, carpenter.

Messrs. Hubbell & McDonnell are building for H. W. Holcomb, three double two-story brick dwellings, 40 by 65 feet, slate and gravel roof; cost \$7,500.

Mr. A. Moross is building a two-story double brick dwelling, 44 by 62 feet, stone trimmings, slate roof; cost \$7,000.

Mr. Henry Letourneau is building a two-story frame dwelling, 24 by 68 feet, slate roof; cost \$4,000.

Fremont, Neb.—Architects Mendelssohn & Fisher, of Omaha, report: For May Bros., brick warehouse; cost \$10,000. For Fred Meyer, brick residence, stable and laundry; cost \$25,000.

Hailey, Idaho.—Architect F. M. Ellis, of Omaha, Neb., reports: Two-story and basement brick and stone school building, 83 by 73 feet; cost \$20,000; under way.

Homestead, Pa.—Architects Barr & McBride, of Pittsburgh, report: For John Munhall, two-story frame dwelling, 54 by 54 feet; cost \$10,000; cellar under way; H. C. Oakley, builder.

Jefferson City, Mo.—Architect F. B. Miller reports: Outlook better than for several preceding years. For L. C. Lohman, brick opera house, 40 by 100 feet, stone trimmings, composition roof; cost \$13,000; under way; A. Opel & Co., builders. For F. Beckers, two-story brick dwelling, 25 by 70 feet; tin roof; cost \$3,500; projected. For Wm. Bradbury, frame dwelling, cost \$3,000; projected. Remodeling Baptist church portico and belfry, slate roof; cost \$2,000.

Kansas City, Mo.—Architect F. B. Hamilton reports: For Whitman & Barnes Mfg. Co., five-story brick warehouse, 48 by 102 feet, gravel roof; cost \$25,000; under way; W. A. Kelly, builder. For Chas. G. Perrin, two-story brick dwelling, slate roof; cost \$10,000; plans under way. For E. A. Walmsly, two-story frame dwelling, 22 by 50 feet; cost \$3,000; plans under way.

Architect Geo. Carman reports: Present condition and outlook not as good as was anticipated earlier in the season, though it is fair. For John Gray, four-story brick building, 20 by 90 feet; cost \$8,000; under way; day work. For same, five-story brick building, 72 by 110 feet; cost \$30,000; under way; day work. For Dr. Tundal, two-story frame, 30 by 50 feet; cost \$4,000; projected. For J. W. Gorman, two-story brick, 35 by 50 feet, slate roof; cost \$7,000; under way; day work. For Matthew Butler, three-story brick, 35 by 60 feet, slate roof; cost \$8,000; under way; day work. A two-story brick parsonage, 21 by 50 feet; cost \$4,000; under way; Kreisher Bros., builders. For J. W. Norton, three and one-half story brick, 44 by 115 feet; cost \$25,000; under way; J. A. Ross, builder.

W. W. Arnold has under way, at the corner of Ninth and Grove streets, a block of eight three-story and basement brick residences, 35 by 134 feet, cut stone fronts, slate roof, steam heat; cost \$36,000; contracts sub-let.

A. A. Frazier is building for R. E. Higgs, corner of Thirteenth and Washington streets, block of nine three-story and basement brick residences, 35 by 150 feet, on Washington, and 35 by 50 feet on Thirteenth street, cut stone fronts, slate roof, steam heat; cost \$39,000.

W. H. Graham is building on corner of Fifteenth and Olive streets, two-story residence, 36 by 55 feet, Anderson pressed brick, stone trimmings, slate roof, steam heat; also stable, 20 by 28 feet; cost of improvements \$2,000, work being done by the day.

E. A. Phillips is building, corner of Thirteenth street and Tracy avenue, block of eight three-story and basement brick residences, 35 by 136 feet, on Tracy, and 35 by 60 feet on Eighth street, cut stone fronts, slate roof, steam heat; cost \$40,000; A. A. Frazier, builder.

Plans are ready for four two-story brick residences, three 24 by 60 and one 36 by 60 feet, cut stone trimmings, furnace heat, to be built in East Dundee; cost \$24,000.

Lexington, Ky.—Architect H. L. Rowe reports: Outlook fair. For St. Paul's Church, twelve-room parsonage, 40 by 80 feet, all modern improvements; cost \$10,000; projected.

Marshallfield, Wis.—Architect C. Hine, of Chicago, Ill., reports: frame Presbyterian church building, 45 by 55 feet, shingle roof, stained glass; cost \$4,000; to be commenced at once; contracts not let.

Marshalltown, Iowa.—Architect J. S. Blake, of Des Moines, reports: Plans prepared for the Soldiers' Home at Marshalltown. Central building, four stories, wings and bays, three stories, 206 by 120 feet, to be built of brick and stone, trimmed with cut stone, copper cornice, slate, tin and felt roof, iron channels, beams, etc., slow burning construction, hardwood finish, tiling, wood, slate or marble mantels, electric bells, speaking tubes, dumb waiters, closets, etc., stained glass, skylights, passenger and freight elevators, electric light, steam heat and power; building to be commenced as soon as possible; estimated cost \$75,000; no contracts let.

Architect J. G. Weathersby reports: For Ed. Thayer, two-story frame residence, 28 by 46 feet, shingle roof, hardwood finish; cost 2,500; W. S. Reed, builder. Also making sketches for a number of parties who contemplate building. The fact that the Soldiers' Home is to be located here will, it is thought, revive the building business somewhat. First-class carpenters are in demand.

Maywood, Ill.—Architect C. Hine, of Chicago, reports: frame Episcopal church building, 32 by 45 feet, shingle roof, stained glass, furnace heat; cost \$3,000; under way.

McKees Rocks, Pa.—Architects Barr & McBride, of Pittsburgh, Pa., report: For Fred Laninger, three-story frame store and dwelling, 40 by 50 feet; cost \$6,000; cellar under way; Wm. Zuickland builder.

Meadville, Pa.—Architects Barr & McBride, of Pittsburgh, Pa., report: For city of Meadville, two-story brick hospital building, 40 by 62 feet; cost \$15,000; plans under way; contracts not let.

Memphis, Tenn.—Architect M. H. Baldwin reports: Outlook fair. Labor agitation has had a depressing effect on building. The following are under way, and projected: For Joseph Fader, two-story and basement brick residence, 50 by 75 feet; cost \$12,000; under way; John Whalen, builder. Wm. H. Bales, two-story and cellar brick residence, 60 by 78 feet; cost \$10,500; under way; W. B. Donnivant & Bro., builders. For Drs. Mitchell & Mauray, three-story brick hospital building, 50 by 100 feet; cost \$15,000; under way; John Reid, builder. For Robert Davis, two-story and basement frame residence, 40 by 80 feet; cost \$8,000; under way; John Reid, builder. For B. Louini, double frame tenement, 48 by 60 feet; cost \$3,500; under way; F. G. Vignego, builder. For H. & L. Morris, double two-story frame residence, 62 by 80 feet; cost \$10,500; under way; S. P. Drumheller, builder. For Wm. M. Randolph, addition to residence; cost \$11,000; under way; John Whalen, builder. For I. W. X. Brown, two-story brick residence, 40 by 50 feet; cost about \$8,500; contract not let. For B. Lowenstein & Bro., six-story business house, 75 by 148 feet, iron, brick and stone; cost \$90,000 to \$100,000; plans under way.

Miles City, Mont.—Architect Byron Vreeland reports: Outlook for building good. For R. G. Wear, two-story brick residence, 34 by 68 feet; cost \$6,000; under way; Hicks, builder. For H. Trusler, two-story brick residence, 41 by 62 feet; cost \$20,000; plans under way. For E. H. Johnson, two-story brick residence, 45 by 46 feet; cost \$10,000; plans under way. For Chas. B. Towers, brick cottage, 38 by 56 by 56 feet; cost \$3,000; plans under way. For James H. Garlock, brick cottage, 30 by 34 feet; cost \$1,500; F. Whiteside & Bro., builders. For Byron Vreeland, brick cottage, 35 by 48 feet; cost \$2,500; under way; H. S. Richards, builder. Improvements on "Inter-Ocean" Hotel; cost \$28,000; completed.

Mobile, Ala.—Present condition and outlook good.

Architect Jas. H. Hutchisson reports: For Dr. Mitchell, two-story frame residence; cost \$8,000; under way. For Dr. Wm. M. Mastin, two-story brick office and residence, 37 by 80 feet; cost \$4,500; projected. For Mrs. Turner, two-story store, 30 by 65 feet; cost \$2,800; under way; M. Smith, builder. For F. Johnson, one story frame cottage, 35 by 58 feet; cost \$1,200; projected.

Montgomery, Ala.—Architect P. J. Anderson reports: Two other architects here have all they can do, and I have more work offered me than I can attend to. There has been a building "boom" here for the past three or four years, which still continues, many small houses being erected, which rent as soon as completed. The following work of my office is under way: Four-story brick wholesale building, 27 by 106 feet; cost \$21,000; Figh & Williams, builders. For A. P. Tyson, four-story store and office building, Peerless pressed brick, terra-cotta trimmings; under way. For Lehman, Durr & Co., cotton warehouse, 350 by 87 feet; cost \$27,000; Figh & Williams, masons; Thorn & Gorrie, carpenters. For A. P. Tyson, five two-story brick stores, each 20 by 60 feet; cost \$12,500; Worthington & Green, masons; Thorn & Gorrie, carpenters. For same, four two-story and cellar brick stores, each 20 by 60 feet; cost \$14,000; same contractors as above. For City of Montgomery, two-story and basement brick school house, 94 by 92 feet; cost \$16,100; Davis Bros., masons; W. M. Nalls, carpenter. For David Weil, two two-story and basement frame residences; cost \$6,500 each. Allen & Weathers, builders. Also other less important work.

New Corporations.—The Easton Steam Heating Co., of Easton, Pa., has been incorporated. Capital stock, \$50,000. Treasurer, J. Marshall Young; Attorney, D. W. Nevin. The Springer Heater Manufacturing Co., of Prairie du Sac, Wis., has been incorporated. Capital stock, \$20,000. John Springer, John S. Conger, A. G. Baldwin, E. C. Moore, F. A. Oertel, W. F. Conger, D. S. Conger, C. P. Riley, Thos. Baker and A. P. Cummings, incorporators. The St. Joseph Lock Works, of St. Joseph, Mich., have been incorporated. Capital stock, \$5,200. Alex. H. Scott, Louis Kolman, Edward N. Hatch, and M. C. Barnes, incorporators. The Prescott Manufacturing Co., of Boston, Mass., formerly doing business under the same title, has been incorporated. Capital stock, \$15,000. Francis V. Parker, 76 State street, Milton Gale, Samuel C. Lawrence, Ellery Stedman, incorporators.

Oberlin, Ohio.—Architects Weary & Kramer, of Akron report: For Carpenter Bros., brick business block of five stores.

Omaha, Neb.—Architect F. M. Ellis reports: For Brownell Hall, Episcopal school, four-story building, main building 40 by 100 feet, two wings 40 by 100 feet, brick, steam heat, redwood roof, all modern improvements; cost \$60,000; under way; James Griffith, carpenter; Joseph Deiss, mason. For J. W. Griffith, frame residence, 40 by 85 feet; cost \$6,000; plans under way. For Orchard Hill Building Association, eight, and probably twelve, frame and brick houses; cost \$1,200 to \$2,500 each; also ten houses, 28 by 28 feet; cost \$13,500. For Geo. Higgins, two three-story and basement stores, 40 by 90 feet; cost \$15,000; plans under way.

Oskaloosa, Ia.—Architect J. G. Cordner reports: Outlook fair; plans about completed for cottage, 41 by 55 feet, to be erected for Wm. Kalbach; cost \$3,000. For James Atchison, cottage, 34 by 48 feet; cost \$2,500; about completed; J. C. Montgomery, contractor.

Pittsburg, Kan.—Architect S. B. Abbott, of North Springfield, Mo., reports: For J. S. C. Goss, brick Queen Anne cottage; cost \$2,500; under way; Fred, Mussum, builder.

Pittsburgh, Pa.—Architects Barr & McBride report: Present outlook is not very good, and would look brighter for the future if labor troubles were settled. The "Penn Block" for Mr. C. D. Irish, is now under way. It will be eight stories, brick and stone, flat roof, 60 by 120 feet; cost \$85,000; Harrold & McDonald, builders. For H. P. McCullough, two-story frame dwelling, 40 by 62 feet; cost \$7,000; just finished; W. S. McCloskey, builder. For Rev. Chapman, two-story brick dwelling, 17 by 35 feet; cost \$6,000. For Bissell & Co., store front; cost \$1,000; Cochran & Davis, contractors. For Jas. McAlee, at Mt. Oliver, two-story brick dwelling, 35 by 55 feet; cost \$5,000; not yet commenced.

Racine, Wis.—Architect A. Druiding, of Chicago, reports: Catholic school building, three stories, 50 by 100 feet, Anderson pressed brick, stone trimmings, slate roof, galvanized iron cornice, steam heat; cost \$18,000.

Richmond, Va.—Architect B. D. Black reports: Building outlook not flattering. Labor agitation has caused depression. The following are under way: For Louis Kepler, three three-story brick stores, 50 by 60 feet, iron and stone trimmings; cost \$12,000; F. Sitterding, builder. For Captain Andrew Pizzini, two-story and mansard dwelling, 25 by 72 feet, stock brick, stone and iron trimmings; cost \$5,000. Also addition to store; cost \$2,200; J. S. Gillin, builder.

Richmond, Ind.—Architect Jno. A. Hasecoster reports: Business has greatly improved; outlook is favorable. For B. Star, residence, two-story brick, and frame covered with slate, slate roof; cost \$4,000. For J. H. Berhide, one-story frame cottage; cost \$1,200. For city of Richmond, two-story brick, 93 by 70 feet, stone front, slate and tin roof; cost \$19,530; under way; Thos. H. Harrison, builder. For Saml. Tracy, two-story brick house, 24 by 48 feet; cost \$2,500; projected. For Prof. W. Trueblood, two-story frame house, 24 by 54 feet; cost \$2,600; projected.

Roanoke City, Va.—Architect J. E. Tinsley, of Staunton, reports: For Dr. G. S. Luck, two-story brick residence, ten rooms, ornamental brick trimmings, slate roof; cost \$4,000; plans completed.

Robinson, Ill.—Architect F. M. Ellis, of Omaha, Neb., reports: Two-story and basement brick and stone school building, 87 by 77 feet; cost \$18,000; under way; Brubaker & Co., builders.

Ripon, Wis.—Architect A. N. Barney reports: Business very dull. For H. H. Mead, frame dwelling; cost \$3,500; under way; George Wren, builder. For Belknap Reed, modern frame house; cost \$3,000; under way; George Wren, builder. For Mr. Webb, frame house; under way; Ganes & Lobb, builders. For Mr. Greesie, cottage, 14 by 14 and 20 by 24 feet; cost \$1,800; under way; Andrew Kewaky, builder. Also other small buildings under way.

San Antonio, Tex.—Architects Wahrenberger & Beckmann report: For Albert F. Beckmann, one-story brick cottage, 48 by 50 feet; projected.

Sioux City, Iowa.—Architect G. G. Baldwin reports: Outlook better than a month ago. A good fall season predicted. For Independent School District, Sheldon, two-story frame wing, 36 by 58 feet, to school house; cost \$3,000; under way. For E. D. Ayers, two-story brick store, 30 by 100 feet, tin roof, plate glass; cost \$7,000; under way. For E. H. Stone, two-story frame, 35 by 40 feet, furnace or steam heat; cost \$4,500; under way; J. Pomeroy, builder. For G. M. Pardoe, two-story frame, 28 by 32 feet, furnace heat; cost \$2,200; projected. For Harry Hubbard, two-story frame, 24 by 38 feet; cost \$2,200.

South Bend, Ind.—Architect A. Druiding, of Chicago, Ill., reports: For St. Patrick's Catholic Church building, 51 by 148 feet, brick, stone and terra-cotta trimmings, stained glass, slate roof, galvanized iron cornice, hardwood finish; cost \$19,000; plans completed.

Staunton, Va.—Architect J. E. Tinsley reports: Prospects very good. For Gooch, Hoge & Wayt, three-story brick store building, 45 by 90 feet, terra-cotta and galvanized iron trimmings, tin roof; cost \$6,500; plans completed. For Dr. H. S. Henkel, two and one-half story flat building, brick, tin roof; cost \$4,250; plans completed. For Western Lunatic Asylum, stone and frame barn, 80 by 80 feet, tin roof; two-story brick building for kitchen, etc., 40 by 58 feet, tin roof, iron veranda 258 by 9 feet, cut stone and brick foundation; cost of whole improvement \$7,250.

Stuebenville, Ohio.—Architects Barr & McBride, of Pittsburgh, Pa., report: Four-story brick hotel building, 45 by 160 feet; cost \$18,000; cellar under way.

Springfield, Ill.—Architect Geo. H. Helmle reports: For Congregational church, brick and stone addition to church for lecture room, parlors, etc., 38 by 80 feet; cost \$8,000; projected. For Col. J. S. Lord, two-story Queen Anne cottage, 30 by 30 feet; cost \$2,500; projected. For M. T. Boulton, two-story cottage, 30 by 50 feet; cost \$3,500; projected. For E. D. Hamlin, two-story cottage, 30 by 50 feet; cost \$3,200; projected. For A. Claus, two-story cottage, 32 by 48 feet; cost \$2,500; projected. For Louis Sommer, two-story brick dwelling, 30 by 40 feet; cost \$3,000; projected.

St. Louis, Mo.—Architects Ramsey & Swasey report: For Alfred Bevis, two Queen Anne houses, 43 by 36 feet, two stories and attic, high slate roof; cost \$6,000; under way; sub-let. For John Shankey, two-story brick house, 25 by 45 feet, pressed brick front; cost \$4,000; projected.

Architect H. E. Peipers reports: Just finished for Siebel-Suersdorf Copper and Iron Mfg. Co., a two and three-story brick building, 86 by 120 feet; cost \$10,000; Wm. Rieve & Son, builders. For Chas. Weneker, two-story and mansard stone front dwelling, 24 by 60 feet; cost \$5,000; under way; August Dicke, builder. For G. Cramer, two-story and basement factory building, 100 by 100 feet; cost \$20,000; about completed; Henry Hayen, carpenter. For Frank Peters, two-story brick dwelling, 22 by 48 feet; cost \$3,000; projected. For Chas. Prismeyer, double dwelling, 42 by 62 feet, also stable for 30 horses, 30 by 75 feet; cost \$9,000; projected. Other small work.

Among the permits issued since last report are the following, which call for an expenditure of \$4,000 or over: H. Vogelsang, two two and three-story brick dwellings, 40 by 72 feet; cost \$6,800; J. H. Keefe, builder. J. F. Hackermann, two-story brick dwelling, 22 by 75 feet; cost \$5,000; J. F. Hackermann, builder. W. B. Walls, two two-story brick dwellings, 35 by 59 feet; cost \$7,000; J. T. Wells, builder. M. E. Church Society, two-story brick church building, 50 by 50 feet; cost \$4,700; Barnett & Duffner, builders. P. Griten, two two-story brick dwellings, 41 by 55 feet; cost \$7,400; H. Heitman, builder. J. Koette, two-story brick store and dwelling, 20 by 70 feet; cost \$4,000; B. Koester, builder. P. G. Gerhardt, seven two-story brick dwellings, 119 by 60 feet; cost \$12,000; E. Hoffmann, builder. R. Kahmann, three two-story brick dwellings, 41 by 46 feet; cost \$4,400; A. Fenner, builder. J. L. Claus, two-story brick dwelling, 30 by 55 feet; cost \$4,000; C. H. Mason, builder. F. H. McMahon, three two-story brick dwellings, 50 by 60 feet; cost \$8,000; McCluer, builder. Mrs. Forman, two-story brick dwelling, 22 by 62 feet; cost \$4,900; M. B. Scanlan, builder. E. Goedde, four-story brick store, 27 by 127 feet; cost \$14,000; contracts sub-let. J. Flanery, two-story brick dwelling, 20 by 65 feet; cost \$4,000; J. Flanery, builder. H. Westheimann, two-story brick dwelling, 34 by 64 feet; cost \$5,500; L. Stecher, builder. Mrs. J. H. Vickery, two-story brick dwelling, 51 by 48 feet; cost \$4,000; H. Vickery, builder. Wm. H. Heusieck, double two-story brick dwelling, 42 by 60 feet; cost \$5,000; Fryday & Co., builders. D. B. Breman, two-story brick dwelling, 22 by 65 feet; cost \$5,800; D. B. Breman, builder. L. Hoffmann, two-story brick dwelling, 30 by 48 feet; cost \$5,000; P. Richers, builder. A. Schachner, three-story dwelling, 30 by 48 feet; cost \$5,000;

(Continued to page 88.)

PRICES OF BUILDING MATERIALS.

CHICAGO, JUNE 10, 1886.

BRICK. Per M.

Prussing, Common\$ 7 00@ 7 50

Fronts:

Chicago pressed (Anderson)..... 18 00@27 00
St. Louis pressed..... 27 00
Purinton Kimbell "Standard"..... 24 00
Hinchliffe, Indiana pressed..... 16 00@22 00
Philadelphia pressed..... 42 00@45 00
Milwaukee pressed..... 25 00
Tiffany Pressed..... 22 00@30 00
Trenton..... 38 00
Zanesville (Harris Bros.)..... 29 00
Perth Amboy Buff..... 50 00
" " Mottled..... 50 00

Moulded:

Chicago (Anderson).....\$65 00@300 00
St. Louis.....50 00@125 00
Indiana.....25 00@50 00
Tiffany.....
Zanesville (Harris Bros.)..... 75 00

Enameled:

Enameled edge..... 90 00
Enameled edge and end..... 105 00
Enameled (Harris Bros.)..... 80 00

CEMENT, LIME, ETC.

Per Cask.

Chicago Lime.....\$ 0 65@ 75
Wisconsin..... 90@ 1 00
Milwaukee, Utica, Louisville, Akron..... 1 00@ 1 25
Portland..... 3 25@ 3 50
Keene's coarse..... 7 50@ 9 00
Keene's fine..... 11 00@12 50
Plaster of Paris..... 2 00@ 2 50
Hair (cattle), per bu..... 20@ 25
Hair (goat), per bu..... 40
Sand (lake shore), per yard..... 1 00@ 1 25

STONE.

(Quotations furnished by J. S. F. Batchen.)

Per cubic foot.

Limestone: Promiscuous blocks. f. o. b. cars, Chicago.
Buff Bedford.....\$ 50
Blue Bedford..... 65
Hoosier deep blue Bedford..... 65
" " buff..... 50
Joliet..... 35@ 50
Lemont..... 40@ 50
Salem Oolitic..... 50
Foundation:
Dimension on dock..... 20@ 25
Rubble, per cord..... 8 00
Sidewalk..... 40@ 1 00
Planed..... 40@ 1 00
Sandstone—Promiscuous blocks:
Hummelstown or Philadelphia Brown Stone..... 1 50
Brown Connecticut..... 1 50
Amherst..... 60@ 75
Berea..... 55@ 65
Potomac Red Sandstone..... 1 25
Carbondell..... 1 10
Malone Blue Euclid..... 55@ 65
New York bluestone..... 1 35@ 1 40
Marble:
Italian, veined..... 4 00

Marble, continued:

Tennessee, red..... 2 50@ 5 00
Tennessee, Knoxville..... 3 00
Vermont, white..... 3 50@ 8 00
Ophite..... 4 50@ 5 00
Armolite..... 1 50

Slate:

Roofing, Vermont, per square:

Green..... 6 50
Purple..... 6 50
Red..... 13 50
Black, Lehigh..... 5 75@ 6 75
Black, Chapman's..... 7 30@ 8 00
Black, Bangor..... 5 50@ 5 80

LUMBER, CAR LOTS.

(Lumbermen's Exchange, 250 So. Water St.)

Boards: (Ordinary Dimensions.)

Pine, 1st quality, clear.....\$46 00@48 00
Pine, 2d quality..... 44 00@47 00
Pine, 3d quality..... 42 00@44 00
Common..... 13 00

Siding:

Pine..... 10 50@22 00

Framing Timber:

Pine..... 12 00@17 00

Laths:

Pine..... 2 00

Shingles:

Pine (sawed)..... 2 40@ 2 60
Cedar..... 2 25@ 2 35

Miscellaneous:

Pickets, pine..... 9@ 19
Posts, cedar..... 9 00@21 00
Pine, yellow southern..... 28 00@35 00

HARDWOODS.

(Quotations furnished by Holbrook Co.)

Walnut, 1st & 2d, 1 in.....\$ 75 00@ 80 00
1 1/4 and up..... 80 00@ 100 00
Walnut, counter top..... 15@ 20
Ash, 1st & 2d, 1 in..... 30 00@ 32 00
1 1/4 & up..... 33 00@ 36 00
Ash Steps..... 40 00@ 45 00
Maple, 1st & 2d, 1 in..... 25 00@ 35 00
1 1/4 & up..... 35 00@ 40 00
Oak, white, 1st & 2d, 1 in..... 30 00@ 35 00
1 1/4 & up..... 35 00@ 40 00
Oak, white, quarter sawed..... 50 00@ 55 00
Oak, red, 1st & 2d, 1 in..... 30 00@ 35 00
1 1/4 & up..... 35 00@ 40 00
Oak, red, quarter sawed..... 40 00@ 50 00
Cherry, 1st & 2d, 1 in..... 80 00@ 85 00
1 1/4, 1 1/2 & 2 in..... 95 00@ 100 00
2 1/2, 3 & 4 in..... 25 00@ 30 00
Beech, Red, 1st & 2d..... 26 00@ 30 00
Whitewood, 1st & 2d, 1, 1 1/4, 1 1/2 & 2 in..... 32 00@ 38 00
2 1/2, 3 & 4 in..... 35 00@ 40 00
Birch, red, 1st & 2d..... 45 00@ 50 00
Butternut, 1st & 2d, 1 in..... 50 00@ 55 00
1 1/4 & up..... 20 00@ 25 00
Sycamore, 1st & 2d..... 25 00@ 30 00
Gum, red, 1st & 2d, 1 in..... 35 00@ 40 00
1 1/4 & up.....

FINISHING WOODS.

Mahogany, Mexican, per lb..... 15@ 20
Mahogany, St. Domingo, per lb..... 20@ 25

Finishing Woods, continued:

Mahogany, Cuba, per lb..... 12@ 20
Rosewood, per lb..... 5@ 15

CALIFORNIA WOODS, ETC.

(Quotations furnished by James O. Cuthbert.)

Redwood lumber.....\$50 00@55 00
Redwood shingles—square, hexagon, round, diamond and octagon, small quantities.... 5 25@ 5 50
Mexican Spanish cedar.....150 00@300 00
California pine..... 65 00@ 75 00

Georgia Yellow Pine:

Flooring:

1st & 2d clear, 4 in..... 35 00
1st & 2d clear, 6 in..... 35 00
Boards, D 1 s..... 33 00@ 35 00

Beaded Ceiling:

1st & 2d clear, 1/2 in..... 18 00@ 21 00
3/8 in..... 26 00@ 30 00
7/8 in..... 33 00@ 36 00

Step plank:

1st & 2d clear 1 1/4, 1 1/2 & 2 in..... 33 00@ 35 00

Georgia Cypress:

Lumber, 1st & 2d clear..... 35 00@ 40 00
Shingles..... 3 75@ 4 25

Frame Oak Lumber and Timber:

Plank..... 23 00@ 25 00
Timber..... 24 00@ 30 00

PAINT, ETC.

Per lb.

White lead (American).....\$ Dry. In Oil
Zinc, white (American)..... 8@10 10@ 12
Red, Venetian..... 2@ 6@ 12
Red, Vermilion..... 20@50 40@100
Red, Indian (English)..... 12@ 22
Yellow, Ochre..... 2@ 15
Yellow, Chrome..... 18@ 25
Green, Chrome..... 12@ 20
Green, Paris..... 20@ 35
Black, lamp..... 8@ 30
Blue, ultramarine..... 16@ 35
Putty..... 3
Whiting (dry)..... 1@ 2
Paris white (English)..... 2@ 3
Litharge (American)..... 6@ 10
Sienna, burnt..... 9@ 16
Umber, burnt..... 7@ 16
Oil, linseed (raw), per gal..... 42
Oil, linseed (boiled)..... 45
Turpentine..... 45
Varnish, coach, " "..... 1 25@ 2 00
Varnish, shellac, " "..... 3 25@ 4 00

HARDWARE.

Per Keg.

Nails:
Spikes, wrought..... \$3 40
Tennpenny, common..... 2 15
Shingle, 4 s..... 3 90
Lath, 3 s..... 5 15
Steel nails, 10's to 60's..... 2 30
For steel nails add 20 c. per keg.
For finishing-nails add \$1.50 per keg.
For casing-nails add 75 c. per keg.

Klute & Hilderbrand, builders. Collier estate, alterations in five-story brick store, 100 by 150 feet; cost \$5,000; sub-let. Mrs. H. Beers, five-story brick hotel, 51 by 89 feet; cost \$45,000; J. Kimple & Son, builders. G. Tremmel, two two-story brick dwellings, 44 by 56 feet; cost \$6,000; C. Kellermann, builder. G. Fillo, three-story brick store and dwelling, 38 by 55 feet; cost \$5,000; sub-let. Mrs. A. McGrade, two-story brick dwelling, 25 by 64 feet; cost \$5,000; M. Connelly, builder. P. P. Furber, two-story brick dwelling, 50 by 35 feet; cost \$4,800; sub-let. J. V. Williamson, repairing four-story brick building, 50 by 125 feet; cost \$10,000; C. J. Cutler, builder. T. Kniker, five-story brick store, 50 by 90 feet; cost \$25,000; sub-let. S. P. Johnson, two two-story brick buildings, 47 by 38 feet; cost \$6,000; S. P. Johnson, builder. Cable & Western R. R. Co., one-story brick round-house, 67 by 70 feet; cost \$5,000; J. Waters, builder. J. Steffen, two-story brick dwelling, 21 by 50 feet; cost \$4,000; J. Steffen, builder. H. Stolt, two-story brick dwelling, 30 by 50 feet; cost \$4,000; Gross & Klute, builders. D. B. Churmann, two-story brick dwelling, 33 by 36 feet; cost \$4,000; G. I. Barnett, architect. J. E. Cowan, two-story brick dwelling, 22 by 68 feet; cost \$4,000; T. C. Bonsack, builder. Dillon's estate, six two-story brick dwellings, 84 by 44 feet; cost \$10,000; C. Heucke, builder. Culver Bros., two-story brick dwellings, 25 by 50 feet; cost \$4,000; A. E. Cook, builder. J. O'Donnell, three two-story brick dwellings, 50 by 47 feet; cost \$6,000; C. Hoffman, builder. C. F. Talam, two-story brick dwelling, 30 by 71 feet; cost \$13,000; sub-let. Mrs. E. Wainwright, three-story brick dwelling, 27 by 121 feet; cost \$20,000; sub-let. D. Shultz, four two-story brick dwellings, 52 by 44 feet; cost \$8,000; E. E. Squires, builder. L. H. Rumsey, two-story brick dwelling, 21 by 57 feet; cost \$4,500; L. H. Rumsey, builder. A. Cooper, six two-story brick dwellings, 112 by 48 feet; cost \$10,800; A. Cooper, builder. A. Cooper, four two-story brick dwellings, 80 by 48 feet; cost \$7,500; A. Cooper, builder. J. H. Lionberger, two-story brick dwelling, 32 by 55 feet; cost \$10,000; Wm. E. Baur, builder. P. & B. Pollack, two two-story brick dwellings, 35 by 45 feet; cost \$4,150; A. Wagner, builder.

St. Paul, Minn.—Architect Walter Iff reports: The contemplated strikes have somewhat interfered with building. For J. T. McMillan, pork packing establishment; cost \$75,000; under way. For Dr. Gillett, residence; cost \$6,000; under way. For Mrs. Ida McMann, residence; cost \$7,000; under way. For same, double tenement house; cost \$4,000; under way. Pilgrim Baptist Church; cost \$10,000; under way. For W. O. Jones, residence; cost \$4,000; under way. For Albert Boedighner, residence; cost \$4,000; under way. For James Daly, residence; cost \$3,000; under way. For Dr. Lawton, residence; cost \$5,000; under way.

Architects Teltz & Joy report: For Hermann Kirsch, three-story pressed brick and stone store and dwelling, 45 by 70 feet; cost \$5,350; under way; Wm. Mantuffell, builder. For Edward Langevis, two-story brick and stone store and dwelling, 100 by 60 and 50 by 50 feet; cost \$16,000; under way; V. Cassan & Co., builders. For Yellowstone National Park Syndicate, at Cœur d'Alene, hotel building, 35 by 63 feet; cost \$5,000; projected. At Norris Geyser, hotel, 42 by 153 feet; cost \$20,000; projected. At Grand Cañon, hotel, 45 by 243 feet; cost \$30,000; under way. At Mammoth Hot Springs, hotel, 46 by 300 feet; cost \$100,000; projected.

Waco, Tex.—Present outlook is good, with a large number of buildings on the boards.

Architect W. W. Lamour reports: For Baylor University, three four-story buildings, 124 by 74 feet, brick, stone trimmings; cost \$45,000; just commenced; James B. Barker, builder. For Samuel Sanger, residence; cost \$16,000; under way; day work. Wirth, brick building, 100 by 42 feet, metal roof; cost \$7,000; under way; J. S.

Atkin, contractor. For Alex. Sprint & Son, brick building, 70 by 52 feet; cost \$6,500; under way; Brown, contractor. For J. Madden, brick building, 28 by 40 feet; cost \$3,000; under way; J. S. Atkin, contractor. For Kerchner, Colder & Bro., frame shed, 262 by 100 feet, metal roof; cost \$4,000; under way; J. H. Hanby, builder. For J. McFarland, frame dwelling, 40 by 26 feet, metal roof; cost \$3,500; J. H. Hanby, builder. For J. D. Bellamy, brick stores, 66 by 40 feet, metal roof; cost \$3,000; Herring & Austin, builders. For Mrs. J. K. Brown, frame dwelling, 38 by 33 feet, metal roof; cost \$2,500; under way; F. B. Austin, builder. For A. David, frame dwelling, 40 by 38 feet; cost \$8,000; Frank Wood, builder. For Wm. L. Parsley, frame dwelling, 32 by 26 feet; cost \$3,000; under way. For Mrs. Bryson, brick building, 60 by 40 feet; cost \$2,500; J. Silvy, builder. For Solomon Bear, frame dwelling, 25 by 30 feet, cost \$2,500; C. D. Morrill, builder. For Wm. E. Springer, frame dwelling, 42 by 38 feet; cost \$6,000; under way; C. Twining, builder. For new Honore county, brick jail, slate roof; not contracted yet. For same, frame school house, 152 feet by 56 feet; cost \$8,000; not contracted. For Burr & Bailey, two brick stores, 66 by 33 feet, metal roof; cost \$3,000; not contracted.

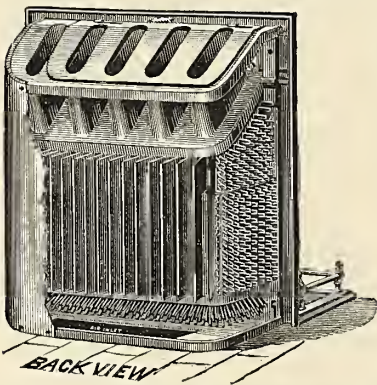
Waseca, Minn.—Architects E. W. Fiske reports: For W. G. Ward, brick store, 22 by 90 feet; cost \$3,000; under way; E. W. Fiske, builder. For Jos. Goetzman, brick store, 22 by 90 feet; cost \$3,000; under way; Frank Phillips, builder. For Thos. Moonan, brick store, 24 by 90 feet; cost \$3,000; under way; E. W. Fiske, builder. For J. A. Pugh & Co., brick store, 22 by 120 feet; cost \$5,000; under way; Flinn & Lansing, builders. For J. McElroy, Eastlake residence, 18 by 30 and 18 by 20 feet; cost \$2,500; under way; Flinn & Lansing, builders. For Thos. Davis, cottage, 24 by 26 feet; cost \$1,000; E. W. Fiske, builder. For Augustus Smith, Queen Anne residence; cost \$2,000; under way; Parmele & Wyland, builders. For Harry Britton, Queen Anne residence; cost \$2,300; under way; Byron Smith, builder. For Maplewood Park Association, hall building, 32 by 60 feet; cost \$1,800; Parmele & Wyland, builders. For D. J. Shaw, residence, 26 by 32 feet; cost \$2,500; E. W. Fiske, builder. For C. H. Ranny, residence, cost \$2,600; not let.

Weeping Water, Neb.—Architect F. M. Ellis, of Omaha, reports: Brick and stone Congregational church, 58 by 104 feet; cost \$12,000; plans nearly completed.

West Manchester, Ohio.—Architect John A. Hascoster, of Richmond, Ind., reports: For Board of Public Schools, J. Wesley Leas, secretary, two-story brick school building, slate roof; cost \$4,500.

Wheeling, W. Va.—Chas. P. Hamilton reports: Outlook for the near future is not encouraging; very little projected, or under way; continued strikes being the cause of depression. For J. B. Gardner, two-story frame dwelling, 40 by 48 feet; cost \$3,000; projected. For A. J. Sweeney, alterations to brick residence; cost \$3,000; projected. Work on Ohio county court house, and other buildings previously reported, is progressing rapidly.

Wilmington, N. C.—Architect James F. Post reports: Present condition and outlook good. For J. Wilder Allison, frame and brick building, 40 by 24 feet; cost \$3,000; completed; J. S. Atkin, contractor. For Champion Compress Co., brick building, 320 by 132 feet, metal roof; cost \$20,000; under way; C. D. Brownley, contractor.



EDWIN A. JACKSON & BRO.,

77 BEEKMAN ST., NEW YORK.

Heat-Saving and Ventilating
GRATE.

SOME WISCONSIN REPORTS.

(See Back Numbers for Illinois and Michigan Reports.)

The ventilating Grate works splendidly. It warms and ventilates our sitting-room, 18 x 15 x 11 feet, and a bedroom above, 12 x 12 x 10 feet.

CHARLES CHURCHILL,
Clerk Circuit Court, Waupaca.

We have had exceedingly cold weather, but are very well pleased with the working of the grate. The atmosphere in the office is as pure as out-door air.

ANSON EDRIDGE & SON, Fort Howard.

One of our office rooms is 22 x 35 feet, and not until the recent cold weather (30° below zero) were we obliged to call in the assistance of steam heat. The fresh-air supply is especially pleasant.

THE ESTERLEY HARVESTING MACHINE CO., Whitewater.

I regard it as the best, both as a heater and ventilator.

EDWIN REYNOLDS, E. P. Alles & Co's Iron Works, Milwaukee.

The Ventilating Grate is in our sitting-room, 18 x 24 x 14 feet. I have kept house for forty years, but have never known such solid comfort, as far as heat and ventilation are concerned, as we have had since using your grate. In moderate weather we heat and ventilate four rooms below and three rooms above.

S. B. AMORY,
Fond du Lac.

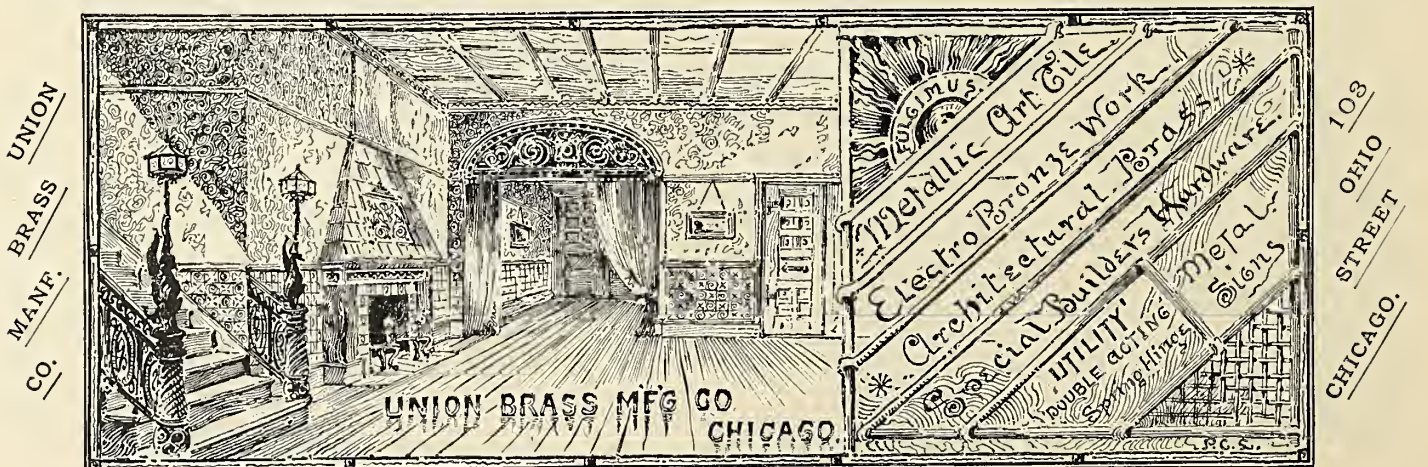
The grates in my library, also in hall, both of which convey heat above, give excellent satisfaction. They are also elegant in their finish and style.

F. N. FINNEY,
Gen'l Manager Wisconsin Central Ry., Milwaukee.

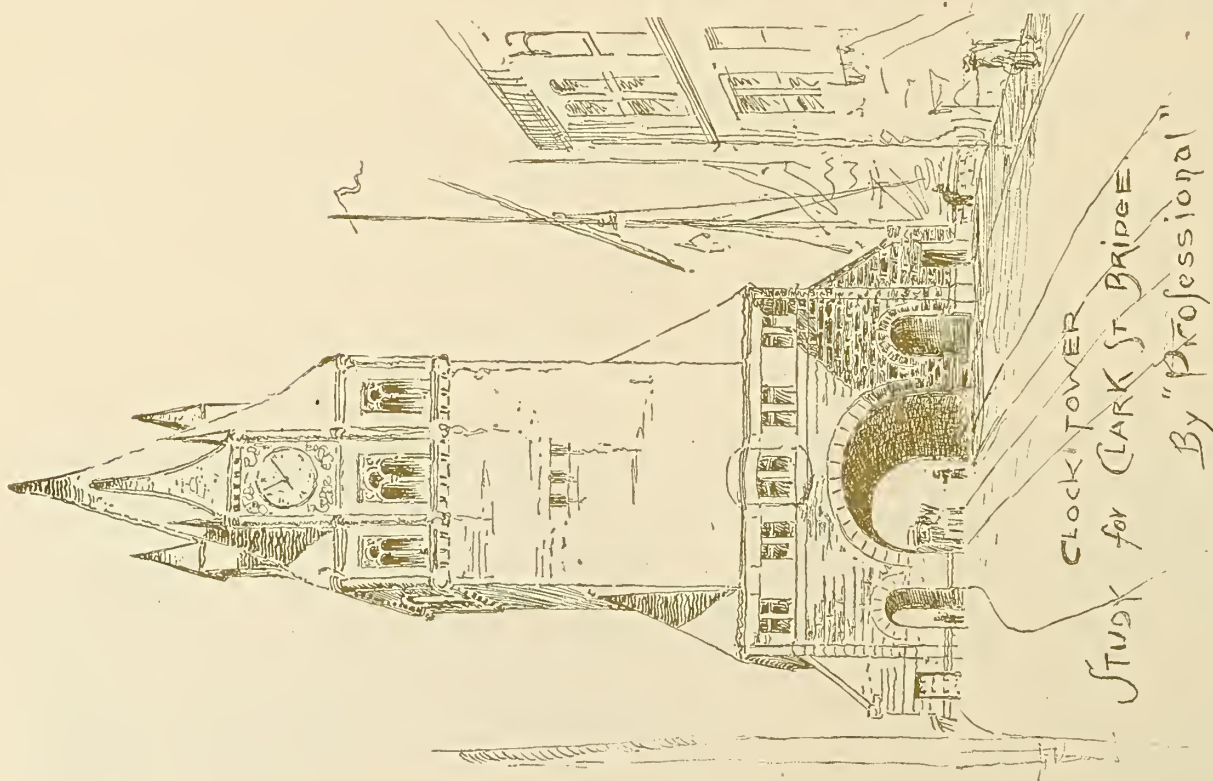
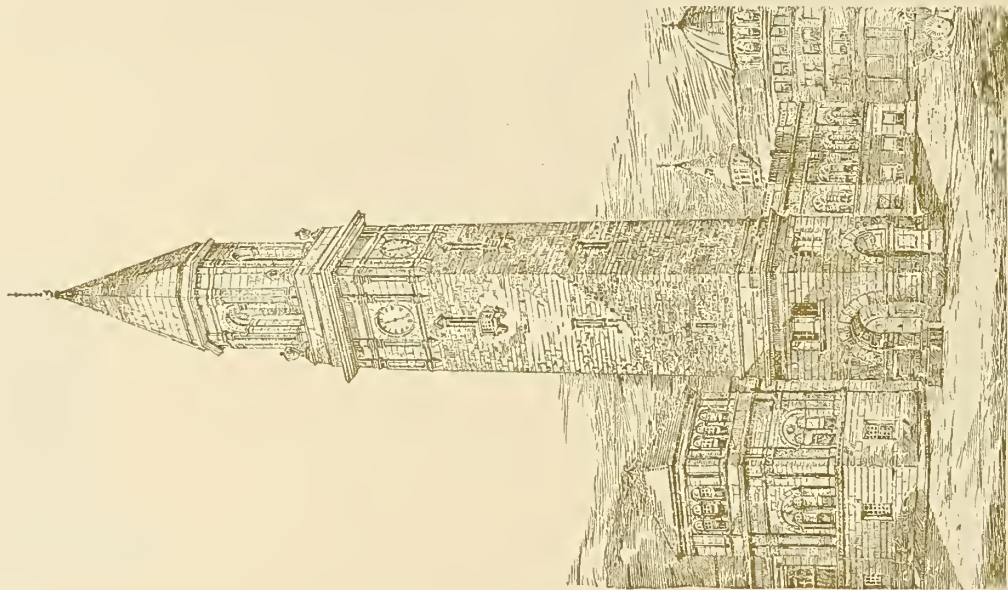
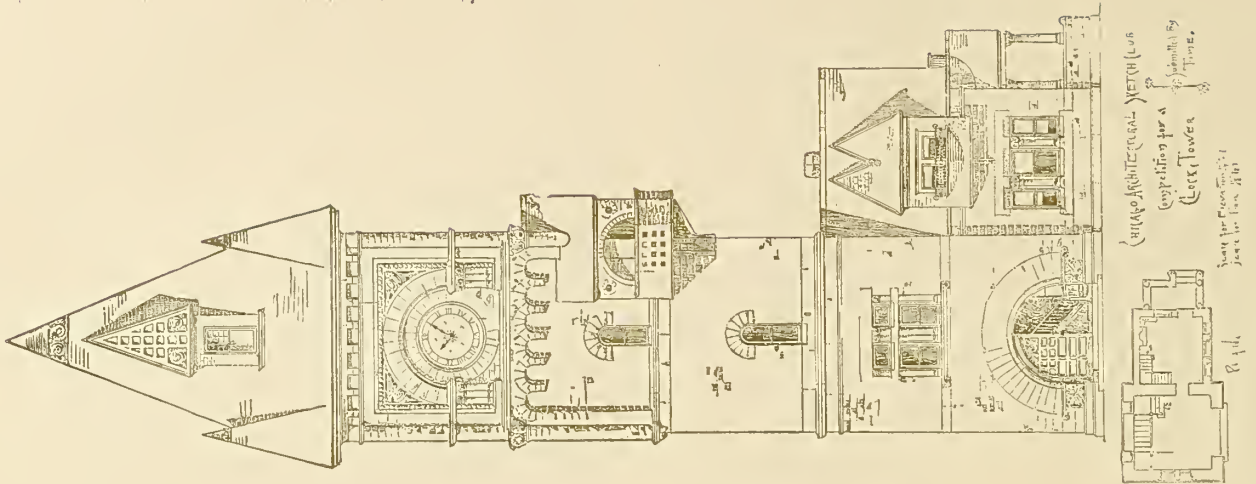
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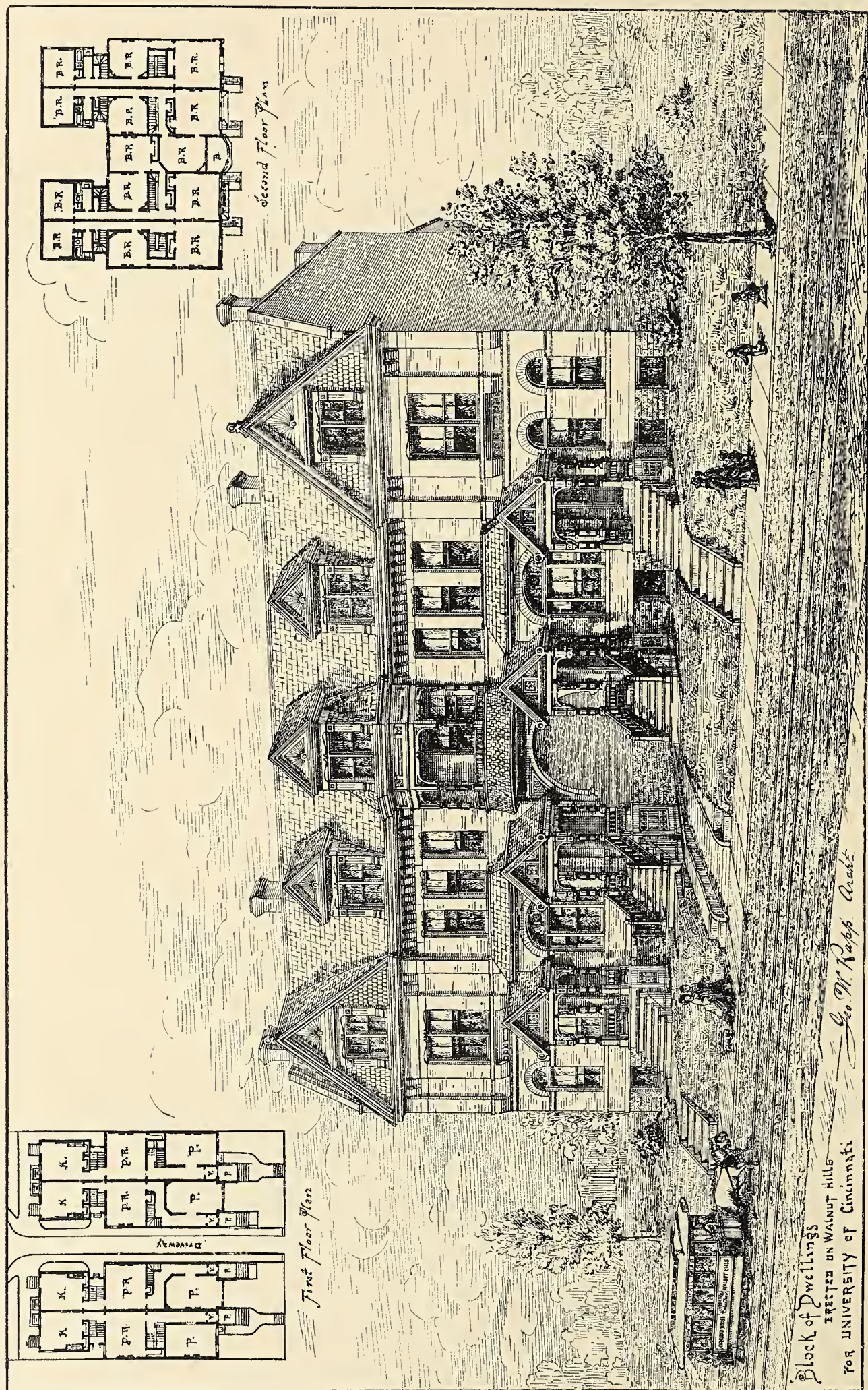
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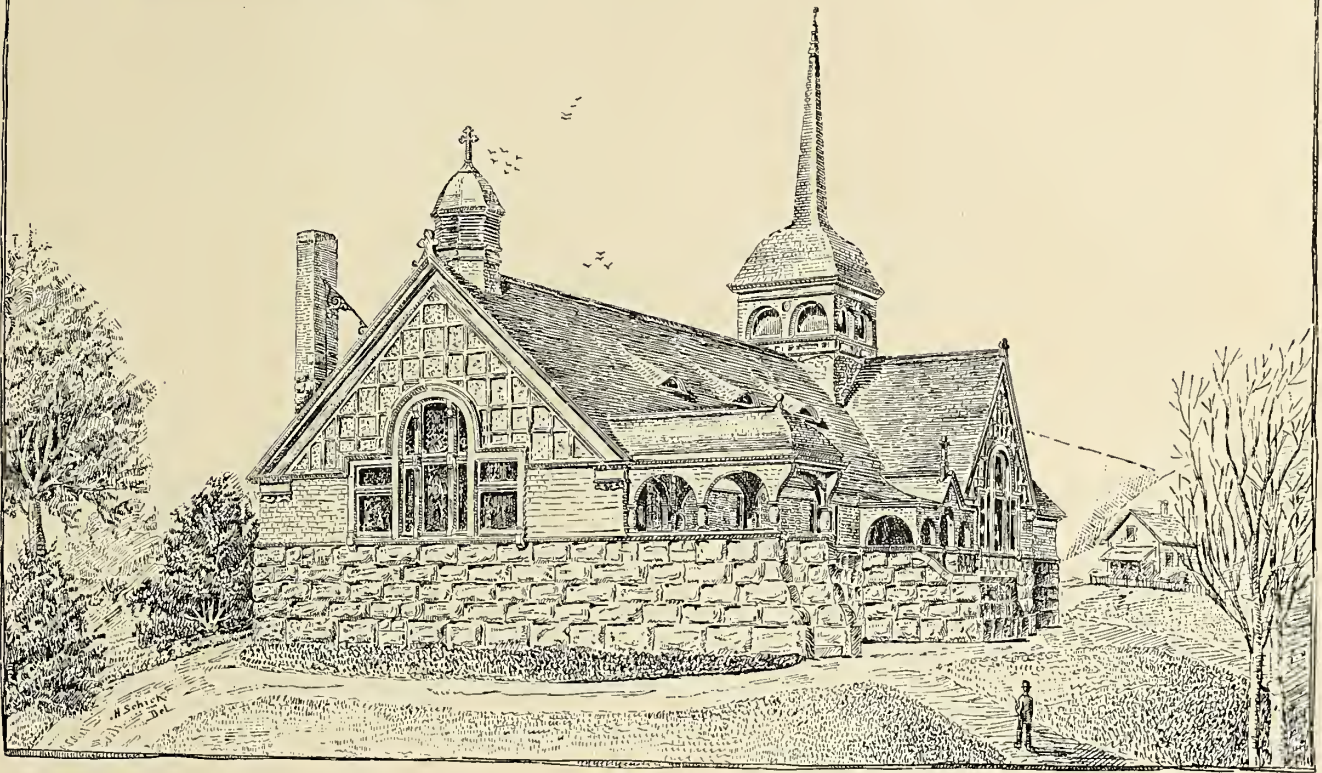






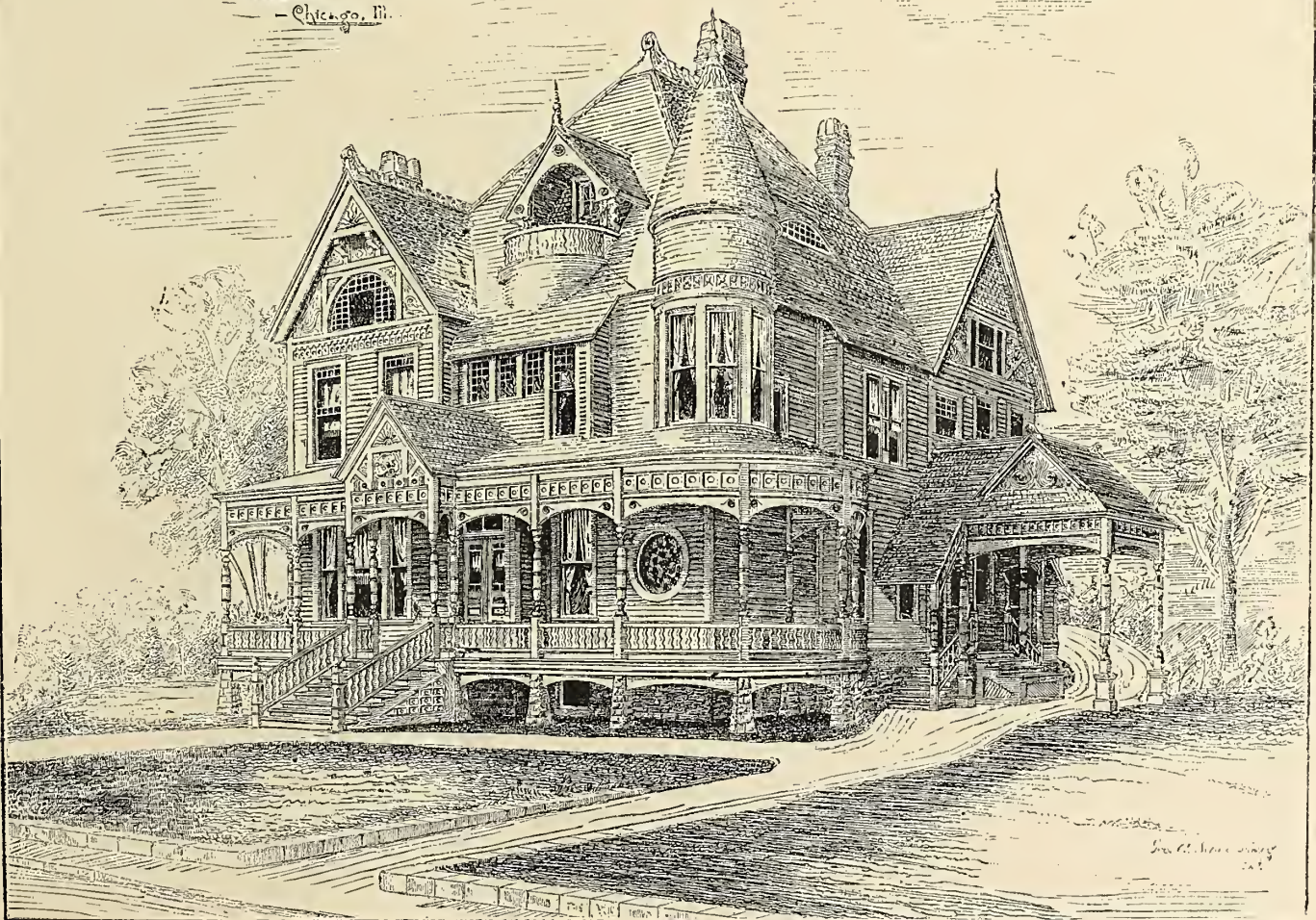


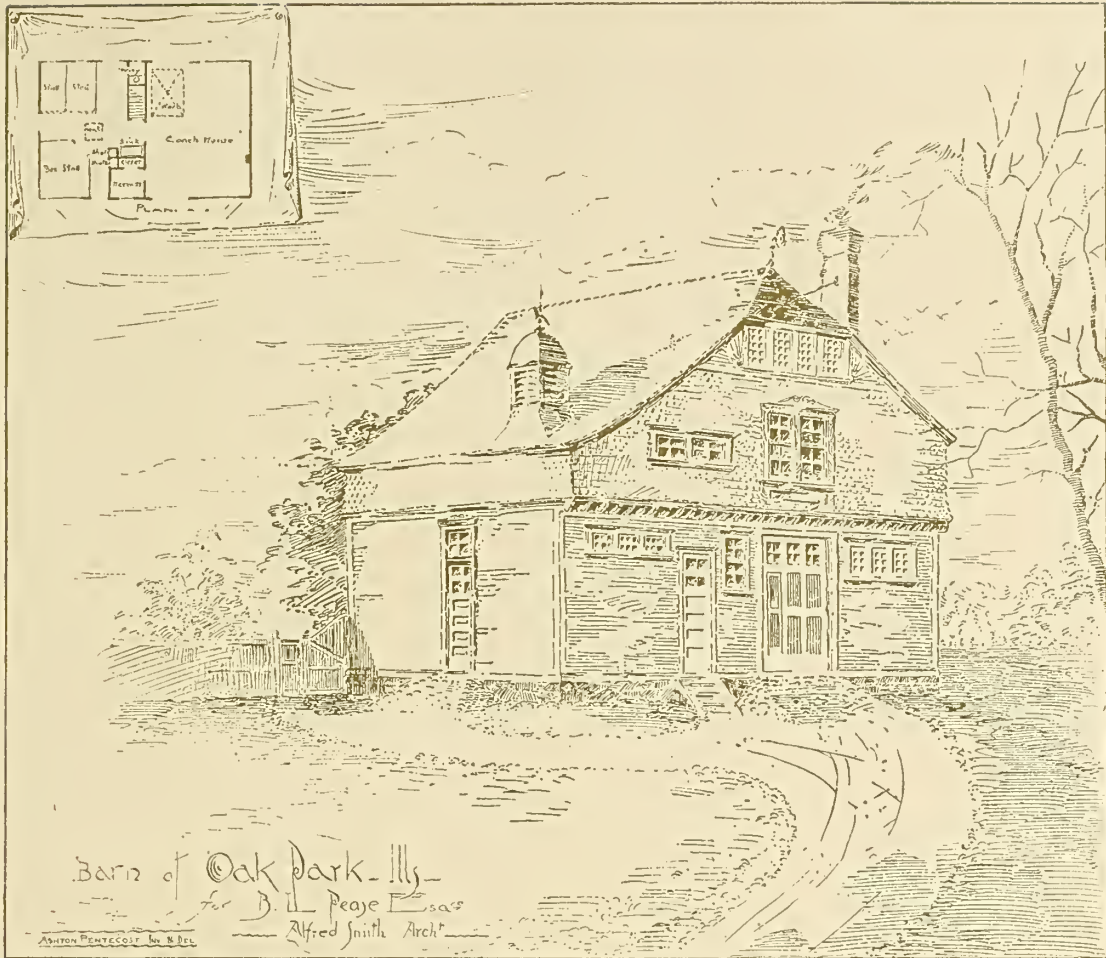
Design for Chapel of All Saints, Omaha, Neb.
Mendelssohn & Fisher, Arch'ts.
Omaha, Neb.

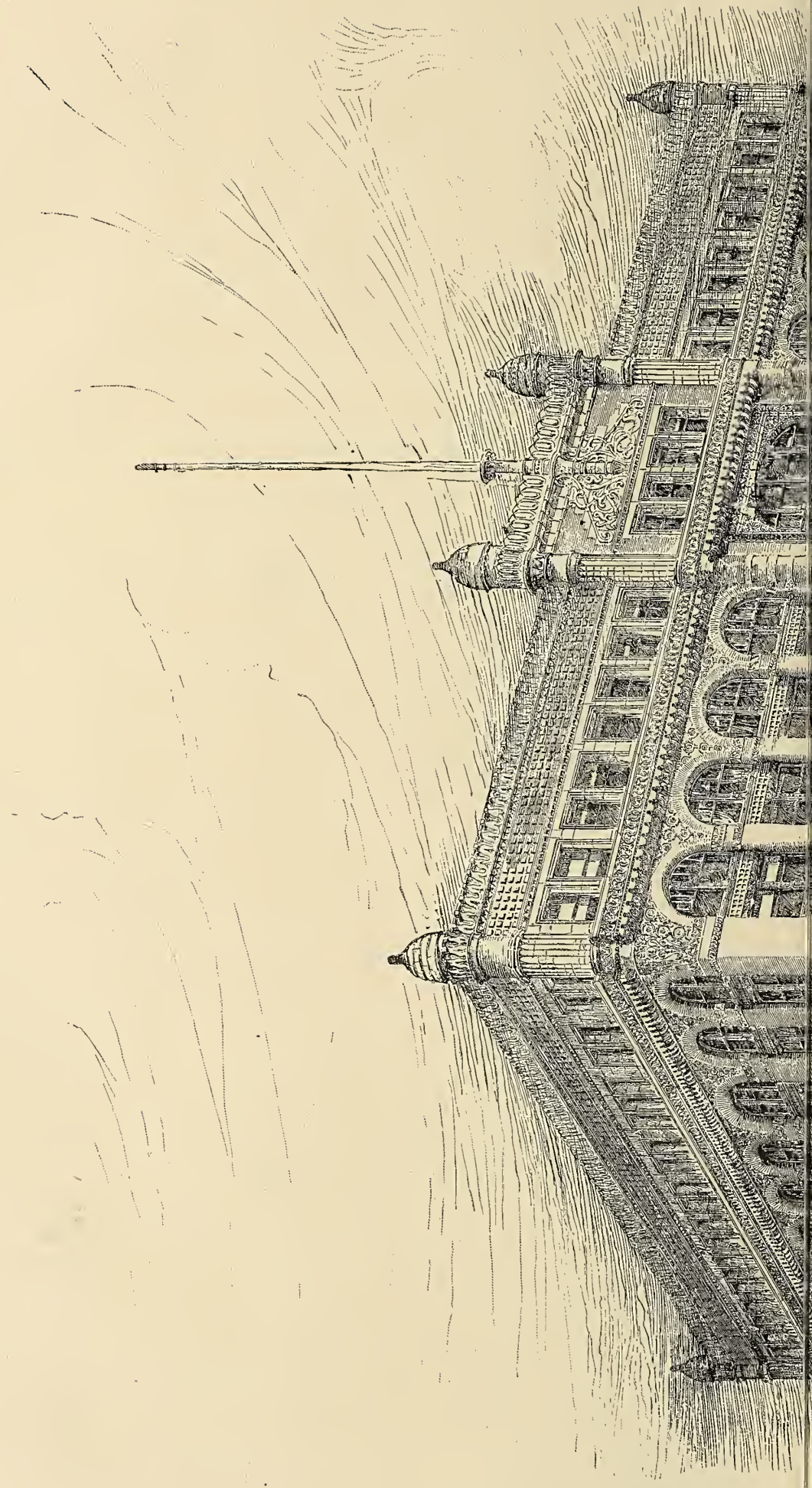


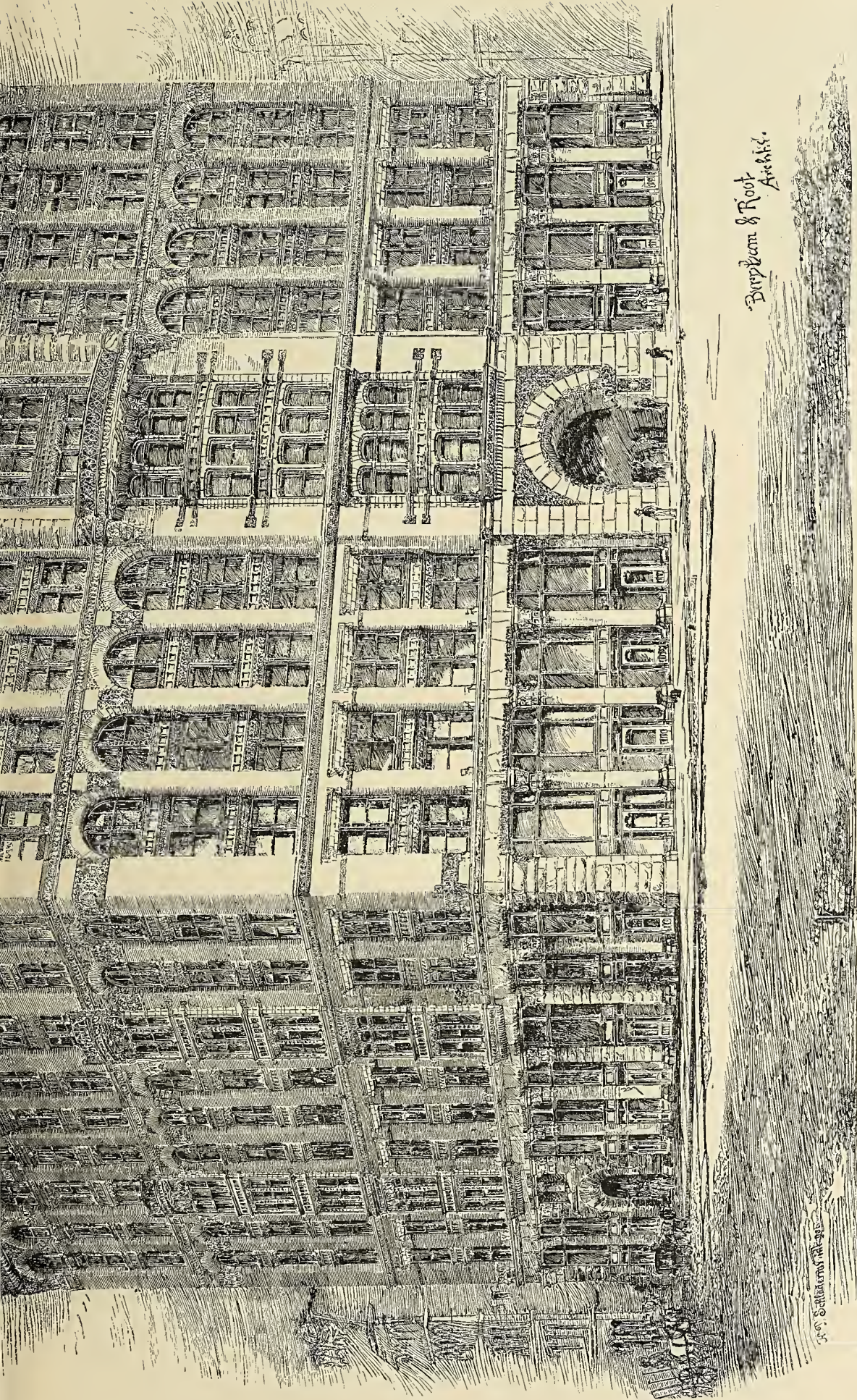
Residence for
Jesse Sherwood, Esq.
Harvard St. Englewood, Ill.

B.W.S. Clark
— Architect —
— Chicago, Ill. —









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Inland Architect and Builder Print.

OFFICE BUILDING, BEING ERECTED BY THE CENTRAL SAFETY DEPOSIT COMPANY,
SOUTH-EAST CORNER ADAMS AND LA SALLE STREETS, CHICAGO.

BURNHAM & ROOT, Architects.



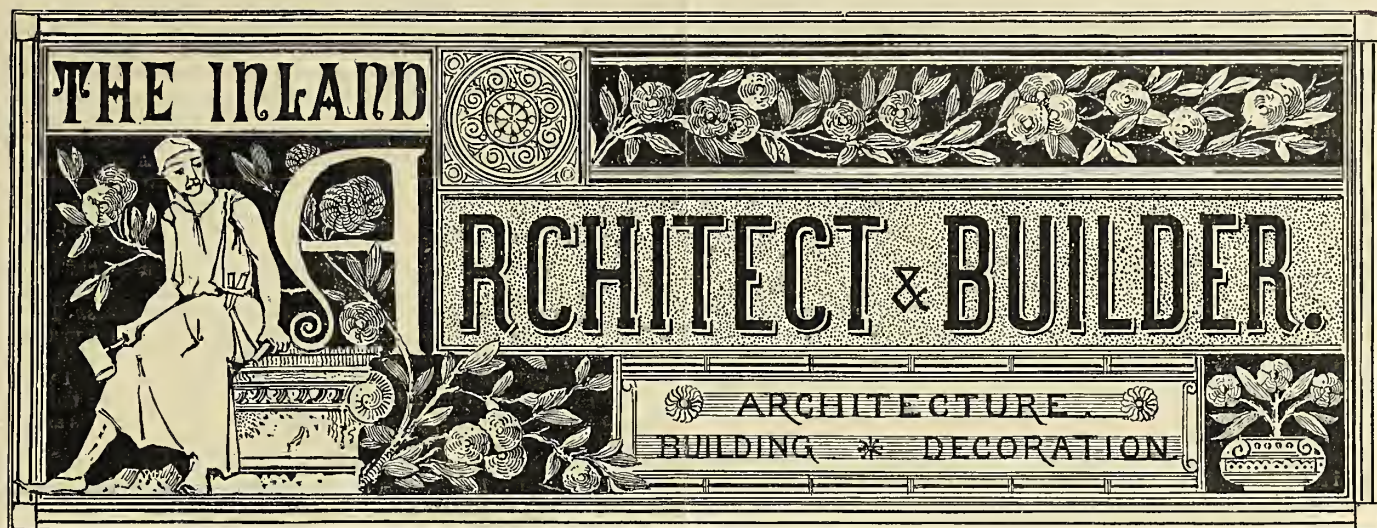
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A MONTHLY JOURNAL
(WITH AN INTERMEDIATE NEWS NUMBER)
DEVOTED TO WESTERN INTERESTS.

OFFICIAL ORGAN OF THE
WESTERN ASSOCIATION OF ARCHITECTS.
(A NATIONAL ORGANIZATION.)

VOL. VII.—No. 10.

CHICAGO, JUNE, 1886.

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Regular number, 25 cts. a month.
Intermediate number 10 cts.

INTERMEDIATE NEWS NUMBER,

DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

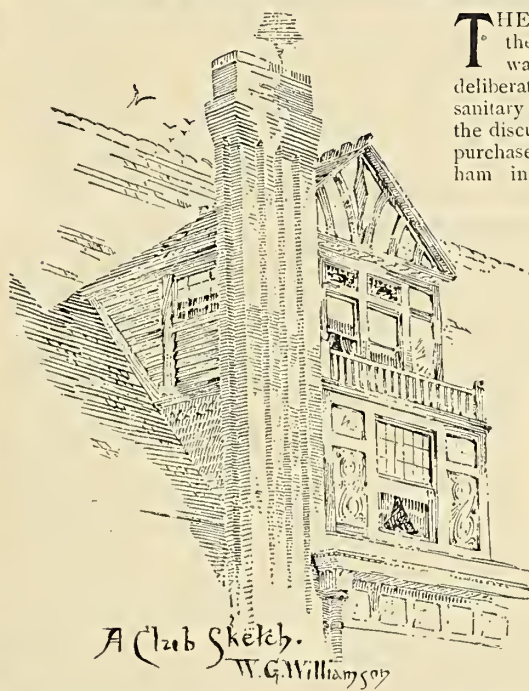
PUBLISHED BY

THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

THE labor question has largely resolved itself into "where shall we get work," instead of "how many hours will we work and for what amount of wages." In some instances the pressure of present contracts seemingly compelled contractors to work eight hours, a course which both contractors and workmen are already regretting. It is a healthful sign for the future prosperity of the laboring classes that they have in a large measure resolved to think for themselves, and not be led by the delusive hopes held out and the fancied wrongs depicted by the professional agitators, who, as leaders in the trades unions, are mainly responsible for the loss of character, prestige and money which the workingmen have suffered through the unwise and uncalled for agitation of the past three months. When the source of much of the present disorganization of labor is looked for it will be also found in the fact that the principle of economy is as unknown to the mass of workingmen as the relation of capital to labor. There has been a better opportunity for men to save money during the past three years than for the past two decades. Wages in general have been good, and breadstuffs and clothing steadily falling in price. The general failure among banks ten years ago has seemingly had much to do with the loss of the spirit of saving, and while some are wise enough to put their earnings into homes the majority live with little thought for the future, and labor blames capital for that which it is itself most to blame. There is a positive demand for government savings banks where workingmen could make small weekly deposits with a guaranteed security that they could not feel in regard to any private bank.

Illinois State Architectural Association.



THE June meeting of the State Association was given to final deliberations upon the sanitary law bill and to the discussion of party wall purchases, President Burnham in the chair. The business session was opened by Frederick Baumann, who, on behalf of the committee having in charge the sanitary bill, made the following report:

I am sorry to report that the committee have not got so far as they wished to. We had a preliminary meeting at Mr. Adler's office, having previously invited all the gentlemen interested in the subject—Dr. De Wolfe, Mr. Genung, Dr. Rolph and Mr. Cheney of the Sewage

Commissioners—and after engaging in a preliminary talk on the subject, adjourned to have the meeting in accordance with the resolution passed.

Dr. De Wolfe told us at that meeting that the law would be against such a bill as the committee had in view, in that the legislature alone had the right to establish and define laws, and attach penalties, and that it could not appoint a commission or a committee of any kind, and give it the power to enact penalties at their own pleasure. We then invited our friend, Mr. Beach, counsel for the Citizens' Association, to prepare for us a preliminary opinion as to how this matter stands, as to whether we could go ahead and try to bring it before the legislature, or whether it would be useless to attempt to do so; and Mr. Beach has prepared such opinion, which, if you will kindly listen to, I will ask him to read to you now.

Mr. Beach read an opinion upon the case (given in June issue, page 82), and in conclusion said that he was of the opinion that the proposed bill, in the terms indicated, would not be upheld by the courts, but believed that a law free from objection on constitutional grounds could be so framed as to substantially accomplish the end in view.

Mr. Baumann: Gentlemen, you have heard the legal opinion, and if there is anything to be said by any of those present, particularly Dr. De Wolfe, we would like to hear from them.

Dr. De Wolfe: I am very much obliged for your liberal assistance in providing a legal guide for the furtherance and prosecution of this work. The Health Department has presented to you the outline of a law which we desire you as a society to discuss, to criticize and to amend in any way you may elect. In my acquaintance with legal matters connected with the Health Department during the past nine years, I am well aware of the fact that the position this legal gentleman has taken is a correct one, and that the legislative powers cannot be exercised by appointed bodies. The legislature could not delegate to the Health Department of the city of Chicago the right to make laws and tax penalties. Now, I have nothing to

do but to wait for such discussion of this proposed law that we have offered you as you propose and desire to make. If during the progress of this discussion you wish any information from Mr. Genung or myself, we shall be very glad to give it. For my own part, I have no desire to insist upon any proposition that I have presented to you; I simply offer it to you as a plan, to criticize as you please, to add to or to curtail, and that we may mutually discuss these amendments, and I am sure we shall come to an understanding that will be acceptable to us all. The Health Department has no desire (because they recognize the folly of the undertaking) to attempt the accomplishment of anything in the direction of the improvement of our dwellings, unless we are sustained by the common opinion of your profession. You must lead, and we will try to push a little, but will always follow behind. Now if this committee has anything to report to the society, in the discussion of which I can aid in any way, I shall be pleased to do so; that is what I am here for today.

Mr. Baumann: At the conclusion of Mr. Beach's report there was a suggestion that this bill might be brought about and be more equal to the requirements of the law in an entirely different form from that at first expected by us. It would be well at our next meeting, if the committee is to continue, that we discuss a plan a little more fully, and then invite Dr. De Wolfe and the other gentlemen to our aid. In this way your committee expects to continue its work and report at the next meeting.

The President: As the chair understands it the committee is not limited as to time. It was appointed to carry out this work to a conclusion, whether it occupied a month or the remainder of the year; so that the committee will simply go on with its work, and if there is any question that it believes it must submit to the association, as such, for its advice or consent, that could be done at any time that they saw fit.

Mr. Baumann: I am happy to say that the committee will continue, and will have a meeting very soon to hold this preliminary discussion, asking Mr. Beach to be kind enough to make his suggestions, and then after we have the matter a little better in shape than we have at present, we shall, as I have said, invite Dr. De Wolfe, Mr. Genung, and other heads of departments, and ask their advice and counsel, and endeavor to harmonize and agree, and if not, then drop it.

The President: The matter, as understood by the chair, is now entirely at the discretion of the committee, and it will not even be necessary for them to report unless they feel so inclined. They may invite Dr. De Wolfe and Mr. Genung, and other officers of the government, as they feel inclined, at any time. The thanks of this meeting are of course due to Dr. De Wolfe, Mr. Genung and Mr. Beach.

DISCUSSION OF PARTY WALLS.

The President: The main object of this meeting is to discuss the subject of party walls. It is understood by the chair that the subject is left open for no particular point, but for any that may be brought by the members of the association. If there is anyone who has in his mind anything which he would like to have made more clear and practical, it is now in order for him to bring it forward.

Mr. Randolph: The matter of settlement of party walls seems to be understood in a different way by different architects in this city; there is no uniformity in the practice. For example: Last summer I had occasion to sell a party wall to an architect, and made out my bill for a certain amount. Within the same week I received a charge from another architect for a settlement of a party wall upon an entirely different basis, and to which I objected. Now I think we should have a uniform practice. My opinion is that in paying for a party wall after it has been built the second party paying for it should pay exactly what it is worth, and no more, regardless of what it may have cost or of what the architect's commission may have been.

The President: The question as to whether the architect's commission should be paid as a part of the cost of a party wall is new to me individually. In a few instances that have come under my observation, the architect's commission has been paid, and considered a part of the regular cost of the wall. But since you brought the subject up at the last meeting, I have discovered that it is not generally customary—that it varies. In some cases it is claimed that the architect's commission has nothing to do with it. It seems to me, as Mr. Randolph has said, that this matter should be brought to a uniform practice.

Mr. Adler: A few years ago I had a party wall to sell. I put in the item of architect's commission, with the purpose of at once striking it out if it were objected to. It was. I suggested to Mr. Furber that we refer the matter to Mr. Boyington, who said the architect's commission did not enter into the party wall question. Consequently it was stricken out. I had the same thing to settle with Messrs. Treat & Foltz. I objected to their claim for a party wall; it was referred to arbitration and they decided against me.

The President: There is another question: Suppose it is my client who is paying for the wall. We are the subsequent builders. There is a charge for architectural services; my client's architect's services have been paid for once and you cannot charge for them again. The answer to that is that they must pay for the architect's services or we get no charge upon these services themselves, and we might not upon the half of the wall that he was to pay for. And the reason of that is that it comes into your new design; it is part of it, and you have to take notice of it; have to refigure the strength of the wall, the strength of the foundations—the entire difference of that wall. It probably costs you more than any other continuous wall in your building; because its conditions may be very problematical as to your new design, and it really requires more architectural service.

Mr. Baumann: Allow me to expose this matter a little more fully. A man starts to build; he likes to have a party wall with each of his neighbors. Now the neighbors are not interested at all, and do not know when they will build, they do not want it. But the man who is building wants a party wall. An agreement of the following kind has been made in several such cases and carried out here: The builder agrees to build the walls and give his neighbors on each side one-half of the wall at any time they want

to build—In fact, they own that half of the wall as soon as it is built, but pay not one cent for it.

Another case was where a certain portion was paid one-third or one-fourth. That was the agreement. My own observation is that the party who wants to use the wall afterward is at a disadvantage; he has got to cut his chimneys and flues into it, and his expenses are considerable after that. Then, he has got to pay more per thousand than if he had built it himself. But we cannot change the tenor of this except by our influence in advising people to make party wall contracts in which they say they will pay, for instance, 80 or 85 per cent; and we should never allow any architect's fees to be paid by our client to the other man. If he does so, he does not do right; because his architect has not a particle more trouble and not a moment more time is taken up by him in building this additional half of the wall for another party. And for these reasons I think we had better decide that we adhere strictly to the contract as it may be written, and insist on as low a price as we can possibly get. And it should be one dollar per thousand less than the average price of brick. Then say that we allow no architect's fees to be paid under any circumstances. In that way, I think, we will get to a uniform and just regulation of the matter.

Mr. Boyington: This matter is of considerable importance to all of us. An engagement prevents my staying this afternoon, and I would, therefore, now move that a committee of three be chosen by the chair to make an exhaustive report at the next regular meeting of this association for the uniform purchase and sale of half party walls.

Mr. Baumann seconded the motion, which was carried.

Mr. Randolph: I move that the committee be requested to report at the next meeting as to the form. Seconded and carried.

Mr. Pierce: There is another point which comes up in practice, although not in the way of party walls, and yet it is almost the same, and that is where we have occasion to build upon a party wall in the treatment of foundations, and also where we have occasion to build against a building that is built upon party walls. If it is not too late, or at some future opportunity, I should like to learn the practice of the profession in Chicago touching these two points: In the treatment of foundations where we have to build upon the party line; also, where we have to build against a building that is already upon the party wall, regarding the depth of our foundations, etc.

The President: Suppose, Mr. Pierce, that you prepare a formal set of questions for the next meeting?

Mr. Pierce: I will do so.

The President: I will appoint as a committee on party walls Messrs. Boyington (chairman), Randolph and Sullivan.

The President: The chair would suggest once more to members the necessity of posting the Executive Committee on subjects desired to be brought up before this association. That committee has assumed the function of preparing the business for each meeting, and in order that there may be no confusion, and that everything may come up in proper order, the Executive Committee invites all the members to make suggestions to them as to the subjects they desire to have discussed. Correspondence to be addressed to Mr. Stiles, of the Executive Committee. The meeting adjourned.

Association Notes.

STATE ASSOCIATION OF MASTER PLUMBERS.

The plumbers of the State of Illinois assembled at Chicago and perfected a state association. William McGraw, vice-president of the Chicago association, called the meeting to order, and Mr. McGraw was elected temporary chairman, with P. Mueller, of Decatur, as secretary.

Upon motion of Andrew Young, of Chicago, it was decided to form a state association.

The officers elected are: E. C. Barrett, president; Wm. McGraw and Martin Moylan, vice-presidents; P. Mueller, of Decatur, recording secretary; S. A. Jones, of Rockford, treasurer; Charles S. Stetson, of Freeport, corresponding secretary. On motion, these officers were appointed for a year.

With a few necessary alterations the constitution and by-laws of the National Association was reported by a committee and adopted as the rules of the State Association.

President Barrett resigned, and his place was filled by P. J. Cane, of Alton. Wm. Bowden, of Chicago, was elected sergeant-at-arms. The annual dues were placed at \$2. The association will meet annually, and adjourned to meet next June at the call of the officers, who constitute the Executive Committee. The Executive Committee appointed as committees for the year:

On Legislation—Messrs. J. M. Rippey, of Springfield; G. E. Mathews, of Jacksonville; E. C. Barrett, of Joliet; J. S. Johnston, of Sterling, and F. McNulty, of Danville.

Apprenticeship Committee—J. J. Hamblin, D. J. Whiteford, and J. J. Clark, of Chicago.

Committee of Conference—S. G. Barnstead, of Monmouth; John Kemp, of Hyde Park, and Geo. McIntosh, of Bloomington.

CHICAGO ARCHITECTURAL SKETCH CLUB.

In the absence of J. H. Carpenter, who was to read a paper on terracotta, the time was mainly given to the reading and discussion of an article from the *Magazine of Art* upon Faience work, read by Geo. Beaumont. The following letter from the chairman of the competition committee gives the result of the Chicago Anderson Pressed Brick Company's competition for a brick entrance:

MY DEAR MR. LAWRIE.—Mr. Jenney, Mr. Sullivan and myself agree that the first prize goes to "Jo Jo" (O. R. Enders); the second to "Gas" (T. O. Fraenkel); third to "Hectograph" (Joseph Wechselberger). We regret that there are no more competitors for the junior prize. It is noticeable that the junior competitor has committed himself to a style of design which may be successfully used by old and experienced architects but is dangerous for a young designer. Yours very truly for the committee, J. W. Root, Chairman.

The library competition was extended two weeks, and attention was called to the coming exhibition of architectural drawings at the Minneapolis

Industrial Exposition under the direction of the *Northwestern Architect*. Vice-President Geo. Beaumont presided. A committee of three, Messrs. Lawrie, Beaumont and Trowbridge, was appointed to call upon the President of the Builders & Traders Exchange and present the thanks of the club for the use of the Exchange hall during the year.

At the meeting, June 21, resolutions were passed thanking the editor of the *Chicago Herald* for recognizing the club by publishing the clock tower competitive drawings. The library competition was farther postponed and the fountain competition was postponed two weeks. The next meeting will be subject to the call of the secretary as the regular meeting occurs on a holiday. It will probably be Monday, July 12.

THE MASTER STEAMFITTERS' ASSOCIATION.

The temporary organization of the Master Steamfitters of Chicago has been incorporated and is no longer a local organization, but will enjoy a membership including the leading and reputable firms of the entire Northwest. The officers are John Woodman, president; P. S. Hudson, 81 Jackson street, Chicago, secretary; W. C. Warner, treasurer; and L. H. Prentice, W. C. Warner and P. S. Hudson, trustees. The association has now a membership of all the first-class steamfitting concerns of Chicago.

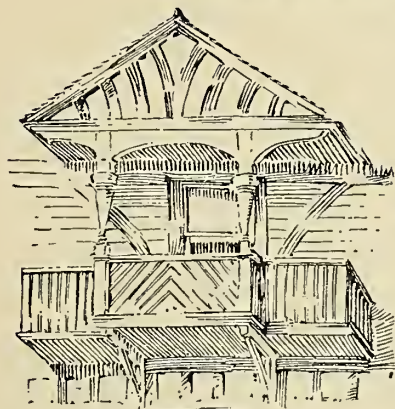
BUILDERS' AND TRADERS' EXCHANGE.

The Library Committee of the Exchange held its annual meeting on the 10th instant, in the offices of the Exchange. A. G. Murray, P. B. Wight and R. C. McLean present. The chairman reported an appropriation of \$1,000 to further extend the Exchange library and the receipt of several contributions, among which are a set of photographic plates called Artistic Homes, presented by J. B. Sullivan & Bro., the well-known decorators. There are four sets, and these were ordered handsomely bound, with the names of the donors on the cover.

A. G. Murray was reelected chairman and R. C. McLean, secretary. The members of the committee will spend part of the summer in searching for valuable works to be added to the library.

The chairman reported that the library was already largely used by the members of the Exchange, and on his recommendation a selection of valuable home and foreign class journals will be made.

Synopsis of Building News.



A Club Sketch
W.C. Williamson

way. For Lutheran Society, Trinity Church, stone building, 73 by 126 feet; cost \$35,000; under way. For A. S. Huntington, brick residence, 43 by 53 feet; cost \$9,000; projected.

Chicago, Ill.—Building prospects are improving daily. There is some demand for steamfitters, but other branches, particularly carpenters, have all the men they can use.

Architects Cobb & Frost report: For the Johnson Estate, extension to present building at corner of Chicago avenue and Wells street. Four-story stores and flats, 76 by 60 feet, Indiana pressed brick, Lemont stone trimmings; cost \$30,000; James S. Price, mason; Julius Meyer, carpenter.

Architect S. S. Beeman, reports: Work at Ivorydale for Messrs Proctor & Gamble, is progressing rapidly; several workmen's cottages under way, also a two-story hall, library and office building, 50 by 70 feet, to be built of brick; cost \$25,000.

Architect J. W. Ackerman reports: For Max Swartz, three-story and basement and attic flat building, 25 by 85 feet, at 78 Wilson street. Anderson pressed brick, Hummelstone brownstone trimmings, galvanized iron cornices, felt roof, hardwood finish, marble mantels, closets and bath, skylight; cost \$8,000; under way. Mr. Krause, mason; Mr. Des Jardens, carpenter. School building, 75 by 90 feet, N. E. corner of Van Buren street and Albany avenue, brick, blue Bedford stone trimmings, galvanized iron cornices, slate roof, steam heat; cost \$40,000; under way; John M. Dumphy & Co., contractors. For P. Phillipson, three-story and basement and attic flats, at 78 Bunker street, pressed brick, blue Bedford stone trimmings, galvanized iron cornices, felt roof, closets, marble mantels; cost \$7,000; contracts not let.

Architect Geo. Beaumont reports: Contracts let for Mrs. Riegheman's residence at 2029 Groveland avenue, two-story and basement and attic, 30 by 58 feet, blue Bedford stone front, galvanized iron cornices, slate, tin and felt roof, skylights, closets and bath, stained glass, hardwood finish, wood mantels, electric bells, speaking tubes, furnace heat; cost \$7,500; under way; B. G. Robinson, mason; H. W. Hyde, carpenter. For Mrs. Hirsch, two-story frame residence, 22 by 60 feet at Lake View, shingle roof, closets and bath, stained glass, electric bells, marble mantels; cost \$4,000; contracts not let.

Architect Alfred Smith reports: For D. Brunt, two-story and basement residence, 25 by 60 feet, basement and first story stone, second story Anderson pressed brick with terra-cotta trimmings, felt roof, closets and bath, stained glass, skylights, furnace heat, hardwood finish, tiling, electric bells, speaking tubes, wood mantels, etc.; cost \$8,000; not contracted.

Architect L. G. Hallberg reports: For J. E. Dean, three-story and basement stores and flats, 50 by 90 feet, 939 and 941 Milwaukee avenue, galvanized iron cornices, composition roof, skylights, closets and bath, mantels, etc.; cost about \$30,000.

Architect C. C. Miller reports: For H. Hebard, brick dwelling, at 436 West Van Buren street; cost \$5,000.

Architect C. A. Weary reports: For F. Gwora & Co., brick dwelling, at 3251 Wabash avenue; cost \$7,000; Gwora & Co., builders.

Architect J. H. Carpenter reports: For J. Kramer, brick dwelling on South Robey street, near Jackson; cost \$7,000; C. F. Holman, builder.

Architect John Otter reports: For H. O. Johnson, flat building at 120 Johnson street; cost \$5,000; A. Ostend, builder.

Architects Schaub & Berlin report: For John M. Selig, brick dwelling at 40 Fuller-ton avenue; cost \$5,000.

Columbus, Ohio.—Architects J. T. Harris & Co. have made plans for Messrs Huntington & Desher, for a five-story brick block, 98 by 187-6 feet, to be built of pressed brick, trimmed with limestone, galvanized iron cornices, iron channels, beams, etc., stained glass, skylights, electric bells and speaking tubes, mantels, tiling, passenger elevator, steam heat, water power, tin roof; building commenced May 1; cost \$120,000; Edward Herbert, mason; Geo. Gibson & Son, carpenters.

Dubuque, Iowa.—Architect F. D. Hyde reports: For C. S. Keller, block of three three-story brick residences, 54 by 58 feet; cost \$6,500; contract let. For W. S. Bradley, four-story brick warehouse, 72 by 113 feet; cost \$12,000; plans prepared. For Wm. Ryan, brick stable, 22 by 62 feet; cost \$1,500. For F. B. Daniels, two-story brick and frame cottage, 36 by 40 feet; cost \$3,000; plans making.

Fort Wayne, Ind.—Architect H. W. Matson reports: For Wm. H. Dreier, two-story and basement brick residence, 40 by 60 feet, stone trimmings, slate roof, hardwood finish; cost about \$6,500; under way; Fred Bandt, contractor. For Wm. Sander, two-story double brick dwelling, 50 by 60 feet, stone trimmings, slate roof; cost \$6,300; Gallmier & Co., contractors. Remodeling parsonage for Rev. S. H. Oechtering; cost \$2,500. Addition to Salem Reformed Church; cost \$1,500.

Galveston, Tex.—Architect Wm. H. Roystone reports: For German Presbyterian Society, frame church building, 35 by 65 feet, slate roof; cost \$7,000. For James Sorley, two-story frame dwelling, 45 by 70 feet, slate roof; cost \$6,500. For F. W. Bersner, two-story frame dwelling, 36 by 55 feet, Akron tile roof; cost \$5,000. For Joel Wolfe, two and one-half story frame dwelling, 41 by 62 feet, slate roof and tower; cost \$8,000.

Architect N. J. Clayton reports: Condition and outlook encouraging. For R. E. Stafford & Co., two-story brick bank and opera house building, slate roof; cost \$14,000; under way. For J. P. Davie, two-story brick, slate roof; cost \$10,000; projected. For Mr. Fribe, two-story brick, slate roof; cost \$10,000; projected. For R. Weiss, frame cottage, slate roof; cost \$5,000. For J. M. Burroughs, two-story frame, slate roof; cost \$5,000; projected. For A. Ferrier, two-story frame, slate roof; cost \$5,000; projected. For R. V. Davidson, two-story frame, slate roof; cost \$5,000; projected.

Henderson, N. C.—Architect A. J. Kivett reports: For R. E. Young, four-story pressed brick store building, 20 by 80 feet, iron columns, plate glass; cost about \$10,000.

La Porte, Ind.—Architect Cass Chapman, of Chicago, has prepared plans for the La Porte County Poorhouse, 200 by 131 feet, two-story and basement, brick, stone trimmings, tin roof, galvanized iron cornices, steam heat and power, closets and baths, to be located about one and one-half miles from La Porte; commenced June 1; to be completed about Nov. 1, 1886; cost \$20,000; general contractor, W. J. Bowen; mason, George Weaver.

Little Rock, Ark.—Plans prepared by Architect B. J. Bartlett have been accepted for the school house for colored children, to be built on Capitol Hill. It will be a two-story brick building, 38 by 68 feet, slate roof; estimated cost \$6,000. The same architect has prepared plans for Christian church to be built on Scoto street, between Second and Third; cost \$4,000.

Fred Rassner proposes erecting a three-story brick store building, to cost \$10,000.

Melrose, Minn.—Mr. F. E. Tanner has prepared plans for a two-story frame store building, 32 by 60 feet, now being erected for himself, at a cost of \$1,500; Jas. Brooks, mason; Chas. Chaffay, carpenter.

Muncie, Ind.—Architect H. W. Matson, of Fort Wayne, reports: For the Willard Estate, three-story monumental building, 23 by 65 feet, "nickel plate" stone, granite columns, French plate and stained glass; contract let to Charles Pearce & Co., for \$9,500. For Jacob Vogt, three-story store building, 22 by 70 feet, pressed brick; cost \$5,000; under way; Higinan & Wood, contractors.

Newcastle, Ind.—Architect W. S. Kaufman, of Richmond, reports: For J. W. Maxin, frame dwelling; cost \$5,000; projected.

New Haven, Ind.—Architect H. W. Matson, of Fort Wayne, reports: Two-story four-room, brick school house, 48 by 56 feet, stone trimmings, slate roof; cost about \$5,000; taking figures.

Pelham, Ga.—Architect Gust. E. Leo, of Atlanta, reports: For J. L. Hand, two-story frame residence, 70-6 by 103 feet; cost \$25,000; work being done by the day. This is a very important improvement for this place, there being only 350 inhabitants.

Spencerville, Ind.—Architect H. W. Matson, of Fort Wayne, reports: Evangelical Lutheran Church, 50 by 76 feet, stone trimmings, stained glass; cost \$8,000; taking figures.

Steuenville, Ohio.—We are informed by Mr. A. S. Parks, agent of the P. C. & St. L. Ry., that there is no union depot to be erected at this place, as was recently reported by another journal.

Stryker, Ohio.—Architects E. O. Fallis & Co., of Toledo, have prepared plans for a three-story brick addition, 41 by 61 feet, to school house, to be trimmed with wood and stone; commenced June 15.

Thomasville, Ga.—Architect Gust. E. Leo, of Atlanta, reports: Remodeling Mitchell County Court House; to cost \$9,000; projected.

Waterloo, Iowa.—Architect F. D. Hyde, of Dubuque, reports: For Waterloo Improvement Company, remodeling and enlarging the Logan House; cost \$15,000; plans under way.

Waukon, Iowa.—Architect F. D. Hyde, of Dubuque, reports: For R. C. Church, new tower, sanctuary, etc.; cost \$2,500; plans under way.

An Extensive Improvement.

CHELTHAM BEACH is destined to be the "Coney Island" of the West, judging from the improvements that are nearing completion there, under the plans of Architects Adler & Sullivan, and the personal supervision of Mr. Sullivan. A company, of which Malcolm McNeil, of Chicago, is the president and financial head, have instituted what will be known as the World's Pastime Exposition. On a beautiful bend in the shore of Lake Michigan, twelve miles south of Chicago, is a tract of seventy acres which will be largely covered by the picturesque and extensive buildings which the architects have designed. A pier and harbor will receive excursion steamers, and rowboats innumerable will be at the disposal of guests, while a fine sand beach with adjacent bath houses gives superb facilities for bathing, and a miniature lake will be to the children a place upon which to launch their miniature boats. The exposition building is 376 feet long, the refectory, with banquet hall, etc., almost as large, and the roller-coaster, the Japanese village, and other attractions, twenty-five in number, will give ample amusement. Upward of 200 electric arc lights will be used, beside a tower and a number of incandescent lights. These latter are supplied from the same circuit with the arc. The plant is being erected and 96 of the arc lights and the incandescent are being placed by the Jenney Company, which has recently opened an office in Chicago. These lights are highly spoken of by those who watched their operation in the illuminating of the New Orleans Exposition. They will place twenty at the disposal of Mr. Payne, who is erecting his mammoth pyrotechnic drama, the Eruption of Vesuvius and the destruction of Pompeii, which will be given July 3 and 5 at the opening of the exposition. This will be the finest spectacular display ever made in the West, and the grand stand erected by the architects will contain 4,000 seats. The entire undertaking is on a par with the work done in arranging the Chicago Exposition building for two national conventions and one grand concert, but the ground covered is the greatest in area of any of the extensive tracts yet built upon for amusement or exposition purposes by these architects.

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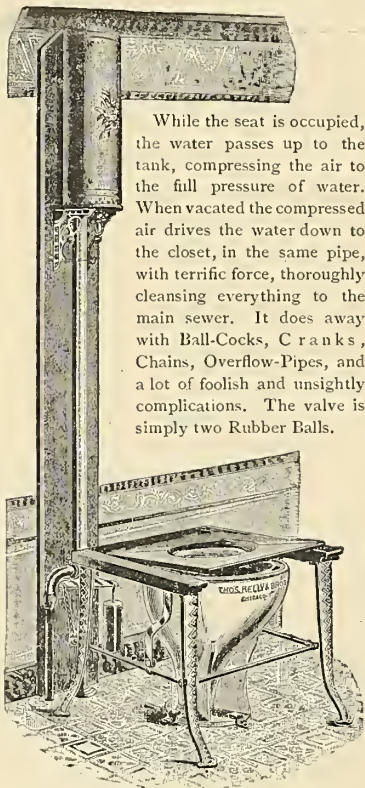
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FIG. 3.
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PROPOSALS.

COURT HOUSE.

[At Salem, Ind.]

Sealed proposals will be received until June 26, for the erection of a new fireproof court-house at Salem, cost not to exceed \$60,000. Plans and specifications are on file at the Auditor's office at Salem; also at the office of McDonald Bros., architects, at Louisville, Ky.

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PROPOSALS.

PROPOSALS FOR WATER-CLOSET APPARATUS.

TREASURY DEPARTMENT,
OFFICE OF THE SUPERVISING ARCHITECT,
WASHINGTON, D. C., May 28, 1886.

Sealed Proposals will be received at this office until 2 P.M. on the 30th day of June, 1886, for furnishing and delivering, properly boxed free on board cars, the water-closet apparatus that may be required for public buildings during the next fiscal year, ending June 30, 1887, in accordance with specification, copies of which and any additional information may be had on application at this office. Bids must be accompanied by a certified check for \$300.

M. E. BELL,
Supervising Architect.

STEAM-HEATING, ETC.

[At Davids Island N. Y.]

DEPOT QUARTERMASTER'S OFFICE,
DAVIDS ISLAND, N. Y. H., May 26, 1886.

Sealed proposals, in triplicate, subject to the usual conditions, will be received at this office until 12 M., June 25, 1886, at which time and place they will be opened in presence of bidders, for providing a steam heating and cooking apparatus for the new mess hall and kitchen at Davids Island, according to plans and specifications to be seen at this office, or at the office of W. J. Baldwin, Consulting Engineer, 96 Fulton street, New York City.

Competition will be confined to parties engaged in the manufacture of or dealers in steam heating or steam cooking apparatus.

Blanks and instructions to bidders furnished on application. Envelopes containing proposals to be marked "Proposals for Steam Heating and Cooking Apparatus," and addressed to the undersigned. Informal bids will not be considered.

The right to reject any or all proposals is reserved by the government.

GEO. H. COOK,
Capt. and Asst. Quartermaster, U. S. Army,
Depot Quartermaster.

PROPOSALS.

PROPOSALS FOR STEAM HEATING.

[At Washington, Iowa.]

Sealed proposals for heating a court house at Washington, Iowa, will be received at my office until 12 o'clock noon, July 8. Plans and specifications may be seen at my office, also at office of Foster & Liebbe, architects, Des Moines, Iowa, to whom all inquiries may be addressed.

The right is reserved to reject any or all bids.

By order of the Board of Supervisors,
J. EICHELBERGER,
County Auditor.

Washington, June 11, 1886.

PROPOSALS.

The Board of State House Commissioners for the State of Kansas will receive competitive plans for the completion of the central portion of the State house at Topeka, Kansas, at their office in Capitol square, Topeka, Kansas, on the fourth day of January, 1887, at 4 o'clock p.m.; said plans to consist of first, second and mezanine floor plans, south and east elevations and transverse and longitudinal sections, all to a scale of eight feet to an inch, size of plan to be governed by plans of basement story, already adopted, to be seen at the office of the Board, style of architecture to be in harmony with the wings already built.

The Board of State House Commissioners will employ such skilled assistants as they may deem advisable to sit with them as an awarding committee. The Board of Commissioners will pay \$3,000 for the best plans submitted and \$1,500 for the second best, the plans for which premiums are awarded will become the property of the State of Kansas, with the right to use the whole or any part or any modification thereof without further claim from the authors for compensation or employment. Carefully prepared estimates of the cost of erecting and finishing the building will be required to accompany each plan submitted.

The Board reserve the right to reject any and all plans submitted.

By order of the Board of State House Commissioners of the State of Kansas.

E. B. ALLEN, Secretary of the Board.

THE INLAND ARCHITECT AND BUILDER.

Vol. VII.

No. 11

JULY, 1886.

THE INLAND ARCHITECT AND BUILDER

A Monthly Journal (with an Intermediate News Number) Devoted to

ARCHITECTURE,

Construction, Decoration and Furnishing
IN THE WEST.

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Committee on Raising the Standard of Professional Requirements for Membership—W. W. Boyington, W. L. B. Jenney and D. Adler, all of Chicago.

Committee on Uniform Contracts and Specifications—The executive boards of the several state associations to report at the next session of the Western Association.

Committee to take charge of the Bill Governing the Office of Supervising Architect of the United States—D. Adler, Chicago; D. H. Burnham, Chicago; J. F. Alexander, La Fayette, Ind.

Committee on Procuring Architectural Drawings and Photographs for Exhibition at the next Convention of the Western Association—The members of the Committee on Formation of State Associations.

Committee on Collection of Statistics on Competitions—C. E. Illsley, St. Louis, Mo.; Sidney Smith, Omaha, Neb.; E. H. Taylor, Des Moines, Iowa; G. W. Rapp, Cincinnati, Ohio; J. F. Alexander, La Fayette, Ind.

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WE are glad to announce to the profession that the first competition made under the recommendations incorporated in the competition code, presented to the Western Association of Architects at the last convention by the competition committee, has been successfully concluded; the Exchange Building Association, of Kansas City, having unanimously adopted the plans of Architects Burnham & Root, of Chicago. While in a future edition we shall present the successful design as well as the drawings, which were most favorably looked upon by Prof. W. R. Ware and the committee, with a history of the competition in detail, we will here briefly outline the manner in which this selection was made. Drawings to the number of about fifty were presented, and were remarkable from the fact that they were, as we have reason to know, from the hands of those foremost in the profession in this country. The drawings were first scanned by a committee from Prof. Ware's most advanced pupils at Columbia College. This committee culled out all sets of plans not drawn in accordance with the conditions of the competition, throwing out all but eighteen, as being obviously insufficient. Those retained were then studied by carefully formulated tests, which again decreased the number of plans materially.

THE plans were here laid aside, and the consideration of exteriors commenced. About fifteen designs were selected as good architecturally and well adapted; but after comparing plans and exteriors but six or seven were found to match successfully. This number, through continued inspection, was finally brought down to three, to which two more were added, and these five were set aside as the premiated designs; up to this point in the adjudication, of course, the authors of the plans were unknown. Professor Ware here called in several prominent New York architects, who without suggestion from him came to substantially the same conclusion in regard to the premiated designs. They then attempted to guess who the authors might be and it is a singular fact that upon opening the envelopes they had all guessed wrong. The drawings were then sent to the committee, at Kansas City, who were unanimous in the selection of the design marked "Utilissimus," which was found to have been submitted by Architects Burnham & Root. We have only been informed as yet in regard to the authors of three of the five designs premiated. Of the five, beside Burnham & Root's, two sets were from Chicago architects. The plan and design of W. W. Clay was very highly complimented by Professor Ware and the committee, and also the design of Edbrooke & Burnham.

THAT the first competition under the competition code of the Western Association should prove such a signal success is not only a matter of extreme gratification to every member of the profession, but proves the wisdom of those who framed it. Kansas City will enjoy the possession of a building which will represent the best architectural talent this country can produce, and that western architects have been honored as its authors will be a matter which architects east as well as west will generally rejoice in, showing, as it does, that the talent of the United States does not lie in any prescribed section. It is not too much to prophesy that this competition will make a strong advance in this country toward constituting the Association code as the

accepted guide to all architectural competitions, and the result will be public buildings for corporate or for government use, which will be models of architectural beauty and practical worth. It must not be forgotten that the Exchange Building Association is deserving of the gratitude of the profession for placing themselves in the hands of the architects, thus giving to them the opportunity which they have enjoyed, it being largely through the efforts of the president of the association, Mr. Edward H. Allen, that the competition was instituted, under the Western Association of Architects' code.

WE are called upon this month to chronicle the death of two architects; one at what seemed but the commencement of a brilliant career, and one when the work of the day seems to have closed and the setting sun announced that the time for labor had ended. Upon the death of the former, Architect Frederick B. White, the New York Architectural League, at its last meeting, issued the following memorial:

The Architectural League of New York is with sorrow called upon to record the loss of a gifted and promising member, Frederick B. White, whose high ideals and singularly bright and attractive nature had earned for him the respect and attention of those who knew him. While yet a student at Princeton College, and without any special architectural training, he gave indications of unusual fitness for the profession he chose, and into the independent practice of which circumstances forced him at an earlier age than he would himself perhaps have chosen.

At the age of twenty-five, and only three years after he had bid adieu to his *alma mater*, he had already designed and executed, besides many smaller buildings, a number of more important works, the excellent qualities of which seemed to promise a brilliant future. In his death the profession loses a practitioner who took a serious and lofty view of his art, and the League a brilliant member.

The Architectural League desires to express its sincere sympathy with Mr. White's family in their bereavement.

HENRY O. AVERY,
Chairman of Committee.

The latter, Architect J. W. Mould, who died in New York on the 14th ultimo, has been known to the profession for almost half a century. Doubtless, he too will receive fitting memorial from his professional associates.

OHIO architects are actively preparing for their second semi-annual meeting which convenes at Cincinnati, on the 15th instant. The secretary has issued the following circular letter, which is addressed to all architects in the state and should be read with attention as it refers to several important points:

OFFICE OF THE SECRETARY, ASSOCIATION OF OHIO ARCHITECTS, }
JULY 1, 1886.

The second semi-annual meeting of the Association of Ohio Architects, will be held with headquarters at the parlors of the Burnet House, Cincinnati, Ohio, July 15, at 10 o'clock, A.M.

Special rates to members of \$3.00 to \$4.00 per day, have been made.

It is desired that all members will be in attendance and that they will at once notify the secretary of such intention, and bring with them such architects of their acquaintance as they deem qualified to become members.

All architects joining the association before the close of the July meeting, will be exempt from the initiation fees, which will be \$10.00. Members of this association, who may join the Western Association, will also be exempt from the initiation fee of \$15.00 of that association.

To make the meeting more interesting, it is desired that architects bring or send with express charges prepaid, such examples of their best work as may be convenient, for exhibition at the meeting.

It is earnestly desired that papers of interest to the profession will be read, and if you wish to do so, please notify the secretary at once, naming the subject.

By order of the Executive Committee.

OLIVER C. SMITH, Secretary A. O. A.

To the profession in Ohio, this meeting will be of the greatest moment. The association is represented in fourteen cities in the state, and has already accomplished much in the formulation of a lien law and other measures looking toward the elevation of the profession and the protection of the public through the procurement of laws governing construction and general practice. Although the season is a busy one, no architect can really afford to neglect this meeting, the measures to be considered being vital to the immediate practice of each member of the profession in the state. Especially to architects of Cleveland, is this true, as they are many in number and have local conditions which they require the strong coöperation of the profession throughout the state to regulate, while the wish of many in that city to welcome the next convention there should induce a large attendance from that city at the July meeting.

IN a late number of the *Gazette des Architectes* is an interesting account of a controversy between the Paris omnibus company and a M. Ezebeck, whose premises at Auteuil adjoin a stable belonging to the omnibus company. In order to economize in the cost of the ground, which is very high in this locality, the company has arranged its stable in two stories and has stalled a portion of its 580 horses on what we would call the second floor, on a level with the sleeping-rooms in M. Ezebeck's tenements adjacent. On this reverberating floor, and the inclined plane by which the horses ascend and descend at all hours of the day and night, their heavy tramping creates an intolerable and never ceasing jar and turmoil which so greatly disturbs M. Ezebeck's tenants, that some of them have entered suit against him for pecuniary damages, and others threaten various methods of obtaining redress, while those who are not constrained by leaseholds have moved out. All this damage, he claims, is owing to the proximity of the stable, and for several years past he has been endeavoring to compel the omnibus company to modify its stable in such way as to abate the nuisance. To this the company has already consented and on the advice of an expert it constructed an additional wall between its stable and M. Ezebeck's premises at an expense of fifty thousand francs, which it was hoped would abate the annoyance. Unfortunately this wall entirely failed of its purpose and M. Ezebeck has applied to another expert, Architect M. Gelis Didot, whose report is printed in full by the *Gazette*.

M. DIDOT'S explanation of the failure of the wall already built to interrupt the transmission of noise and jar from the stable to the tenements, and his advice as to the proper remedy are interesting and suggestive, while his communication is such a model of clearness and conciseness that we regret our inability to print it entire. Briefly resuming he ascribes the failure of this intercepting wall chiefly to the fact that it stands upon the same footing as the original stable wall, and that through this footing all jar and vibration produced in the stable wall are transmitted practically undiminished to the new wall and thence to M. Ezebeck's premises. The new wall is thus practically one with the old one as to the noise and shock complained of. He also finds the distance of this new wall from the old one, namely, ten centimeters, altogether too slight. M. Didot recommends that a new wall be constructed at a distance of two to five meters from the stable wall, that the new wall have a footing entirely separate from the stable footings, that it be sunk to a greater depth and that the space between the walls be left open or filled with some non-conducting substance. He also suggests that the inclined ascend to the second floor might be removed to some part of the stable more remote from the tenements, and also that the horses be stalled in some other portion. Incidentally he mentions the precautions imposed on other noisy occupations as that of goldbeating, printing and numerous manufactures. Sometimes their machinery rests upon special foundations, built up from the ground wholly independent of the building itself, or upon columns rising from special foundations, or on rubber cushions. We may add that sand boxes are sometimes used for a like purpose. M. Didot's comparison between the stable and a goldbeater's shop is vivid and impressive. He says, the former establishments at the most, seldom have more than twenty hammers in operation, while in the stable, even if there are but eighty horses present at a time, the noise from their iron-shod hoofs on the reverberating floor would be equivalent to that of three hundred and twenty goldbeater's mallets, or sixteen times the noise from one goldbeating shop.

SOME months ago the French architectural journal *La Semaine des Constructeurs* reproduced a design made by Mr. Cass Gilbert, of St. Paul, Minnesota, and made it the theme of some quite complimentary remarks upon the history and present status of architectural practice in this country. It may be presumed that this proved agreeable to its readers, for more recently the same journal has resumed the subject, and illustrated it by no less than six selections from American work in a single issue. Of these, one is an interesting attempt at adapting Arabic forms to the requirements of a Minnesota dwelling by Hodgson & Stem, architects, of Minneapolis. Another is of a Cincinnati suburban dwelling, designed by Plympton & Trowbridge, of that city; a third is a dwelling by E. T. Mix, architect of Milwaukee; a fourth is by Rossiter & Wright, of New York; a fifth is credited to Howard Walker, and a sixth to W. R. Emerson, both of Boston. The series consists of dwellings entirely, and, with the exception of the first, they are all fairly representative of the better class of dwellings now being designed by our architects east and west.

IN its comments on American architecture, *La Semaine* never tires of praising the life, spirit, originality and freedom from restraint which it displays. It remarks: "The traditions of Europe are to the American simply an orange, which he has squeezed and sucked dry, and then thrown away." Of the great variety of styles and modes, it remarks: "Let no one judge of American architecture simply by the illustrations here given; the variety is so great there that a very large number of specimens would be needed to give even a feeble conception of it." After remarking upon the earlier pre-occupation of this nation, with its necessary works of internal improvement, its railways and its water-courses, to the comparative neglect of architecture, it adds: "These internal communications once secured, architecture was bound to have its turn next. It has it already. Bravo, l'Amerique, Go-a-head! Hurrah!" The English and French in the last line are quoted literally. The kindly interest of French architects, who are generally conceded to stand at the head of their profession in the world, in the work of their American brethren is most flattering; and the generous enthusiasm with which they watch, and even applaud the successes of American architects should awaken a responsive thrill of fellowship in this country wherever the profession exists. We are already somewhat familiar with the cordial hospitality of French architects and artists to American students in Paris; it is a new and most graceful act of unselfish friendliness for them to extend their regards far across the water and send warm-hearted bravos and hurrahs to our architects who have never been in France, never left the shores of their native land. Such generosity will tend more than ever to inspire a desire in all who care to cross the blue ocean and make in person the acquaintance of such helpfully sympathetic brethren.

THE manual training school movement which, four years ago, established in Chicago one of the most practical as well as complete institutions of its kind, has at last reached the directors of the public schools of most of the large cities, and we confidently predict that another decade will find manual training not only an established department in all properly conducted institutions for public instruction, but its general plan incorporated in their rules of management. The Chicago public schools are already making arrangements in this direction, and the large number of pupils recently graduated from the Chicago Manual Training School has shown the public that at last the question of a practical education has been solved.

Asphalt Foundations.

BY J. FREDERIC ELSOM.

IN every well-regulated physical laboratory are to be found nearly as many demonstrations for determining characteristics governing the foundations of mills and factories as for all other mechanical appliances combined. The power, as well as number of engines, has increased enormously during the past few years. The substitution of iron for wood, and the enlarged size of all machinery, have more than doubled the might to be driven. The growing use of revolving fans, of centrifugal dryers, and of dynamo-electric machines, has brought into requisition a higher speed as well in motors as in shafts, counter-shafts, pulleys, drums and cog-wheels. The work required of steam hammers, ore crushers, stamps, punchers, slotters, shears, rollers and presses is constantly increasing, hence the buildings in which these machine tools, motors and machinery are operated are becoming more and more massive and lofty.

Each and all of these conditions is a source of instability, and serves to either increase the number or amplitude of the vibrations produced, if it does not increase both until they become an annoyance to visiting customers, no little interference to operators, clerks and draughtsmen, an injury to the building and a nuisance to the neighborhood. Foundations of the walls are undermined, the walls themselves buttressed, floors deadened and false ceilings put in, but these undesirable features continue unabated. Its cure does not lie there; too frequently it is ascribed to the material which serves for the foundation for the engine, or the heavy working or the rapid revolving machinery. Bricks or dimension stone, set in mortar or broken stone of varied or uniform size, mixed with hydraulic cement, these are the materials of which foundations are usually built, but are they the best is the question.

Of all the industrial arts known to the ancients, those which have made the least progress are building and road making. Those massive structures erected in Egypt and India still remain without a modern rival, and the roads to no modern city are equal to those by which the Roman drove to his capital. Only recently has it been shown that asphalt is the best material for much traveled roads, and there is no reason to believe that its application to that purpose as well as to building was not well known to the people of antiquity. We have the best of authorities showing that the Romans as well as the Assyrians were familiar with the uses of bituminous cement.

M. Leon Malo, long since determined that a mixture of asphalt and gravel, molded in small pieces, did not soften when subjected for weeks to the hottest summer sun, and he successfully erected a block of similar material which served as the foundation for a horizontal engine of fifty horse power. This massive block has been analyzed and found to consist of stone broken to unequal size, the interstices being filled up with material the same as asphalt. This block became so hardened with age as to be broken up with the greatest difficulty, and the fracture was as clean as that of the finest sandstone rock. The slightest degree of electricity was sufficient to make the vibration of this large engine imperceptible to the senses. For more than twenty years this engine has been running regularly without the least indication of yielding a particle, even under the cylinder.

Some years ago the writer saw a powerful stone-breaker working in the city of Paris, and the foundation was ordinary masonry. The surrounding ground was shaken to the extent that an engraver on glass, carrying on business two squares away, suffered great inconvenience, being unable to finish his work. After the proprietors of the stone-breaker had been served with a temporary injunction they had the masonry removed, and one of asphalt substituted, after which, upon testing the machine no tremor existed, and the artisans pursued their vocations, thinking the injunction was still in force.

Asphalt is a very simple mineral of a calcareous character, naturally impregnated with bitumen in various proportions, say from six to eighteen per cent. The limestone is in the form of small grains, each one of which is coated with a small pellicle of bitumen, which serves to agglutinate them. The asphalt, being heated and agitated for a few hours, a semi-fluid mass is obtained, which, mixed with gravel, makes the best of foundations and roads.

For the foundation of heavy engines and machinery, a casing, the exact size of the intended foundation, is made of tongued and grooved boards, the smooth side inward. This may be hooked, strapped on the corners, or stiffened by stringers or struts attached to it on the outside, as its height and capacity may render necessary. If adhesion between the casing and asphalt is feared, the casing may be lined with thick paper, or coated with whitewash or clay and water. Thus prepared it may be filled with the foundation materials.

In the constantly increasing cases where mixed masonry is a main consideration, the mixed system is to be preferred. By this plan the center of

the foundation is built of ordinary masonry, dimension stone being employed; when this has become thoroughly dry, the space between the stonework and the casing is filled with either asphalt, beton or asphalt masonry, and the whole carefully surfaced with asphalt.

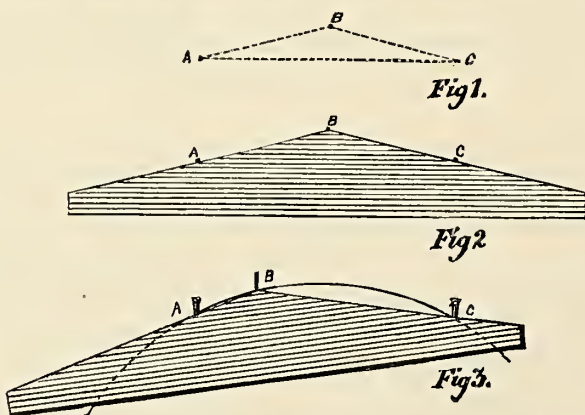
Foundations for any machinery built in the foregoing manner may be considered absolutely non-vibrating; in fact, in this respect they have long since passed the experimental period, inasmuch as a score or more years' test, under the most trying and adverse circumstances, attest the superiority of these foundations above all others, not only as preserving the life of the building, machinery and the like, but as a saving of power otherwise lost in vibrating friction.

Geometry in the Workshop.

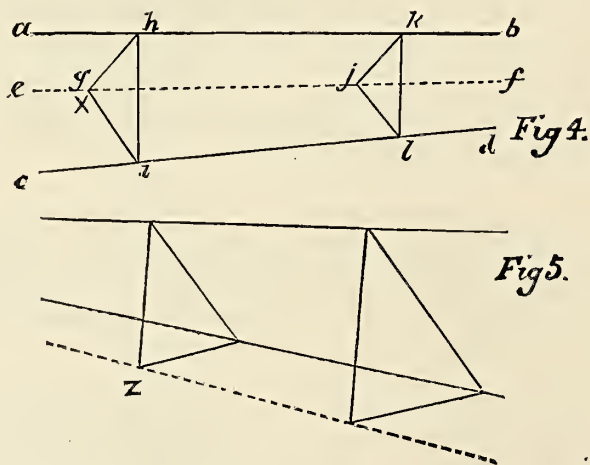
GEOMETRY on paper and geometry in the workshop are two very different things, as, doubtless, many readers have found out. In setting out, full size, in the workshop certain points necessary for the solution of problems, such as the intersection of lines and the centers of circles, are often quite inaccessible, and the ordinary working with compass and rule is therefore not available. Very often workmen will try in such cases to obtain the lines by means of a long piece of string or cord in lieu of compasses, and after repeated trials will usually find the result anything but satisfactory.

To draw a circle, or the arc of a circle, through three given points, is a simple problem, with the working of which most workmen are familiar. Practically, the solution is needed in setting out arch work, striking centers, and a variety of other cases, and with a rule and compass, or a substitute for one, the problem may be worked without difficulty. When, however, the three points come nearly in a straight line as in the case of an arch having a very small rise, the center of the circle, of which the required curve is an arc, is so far distant as to be practically inaccessible, so that other means must be employed.

In such a case the arc may be struck in the following manner: Set out the three points through which the curve is to pass, as A, B, C. Fig. 1.



Take a board and cut the upper portion of it with two inclined sides, meeting at B, and passing through A and C, respectively, as shown in Fig. 2. Let the board be about three times as long as the distance A, C, and if



necessary, use several boards nailed together, instead of one. Now attach a pencil, or a sharp point, at the apex B, of the board with which to trace the curve. Drive in a nail or peg at A, and another at C. If the board is now moved around with the inclined sides sliding against the two nails A and C, the point B will trace a true arc of a circle as shown in Fig. 3.

In the sketches, the points, A, B, C, have, for the sake of clearness, been placed in a position in which the center of the curve passing through

them would be quite accessible, but it will be understood that the method is equally applicable to any three points, if they are situated in any other position than that of a straight line.

A second problem of a somewhat similar kind often arises in the workshop. Two lines a, b, c, d, Fig. 4, are inclined to one another, but are so nearly parallel that, if produced, their point of intersection would be some considerable distance away. It is required to draw a third line, e, f, through a given point x, which, if produced, would pass through the said point of intersection between a, b, and c, d.

The solution is very simple. Draw any triangle, g, h, i, having a corner on each of the lines, a, b, and c, d, and the other corner on the given point x. Now draw another triangle, j, k, l, with its sides parallel to those of the triangle, g, h, i. A line, shown dotted in Fig. 4, drawn through g and j, will be the line e, f, required. If the given point be outside the given lines as at z, Fig. 5, the problem is worked out in the same way, a triangle being drawn as before with one corner on the point z. A second triangle is drawn to the right, which will give the required line, as shown dotted in Fig. 5.

The Buildings Erected by Architect H. H. Richardson.

MR. CHARLES H. RUTAN, one of the firm who succeed to the business of the late Architect H. H. Richardson, has kindly furnished THE INLAND ARCHITECT AND BUILDER the following list of Mr. Richardson's works. Mr. Rutan furnishes the list from memory, and has left from the list numerous small houses and alterations:

Episcopal Church at West Medford, Mass.
Western Railway Office Building, Springfield, Mass.
Church of the Unity, Springfield, Mass.
Agawam Bank Building, Springfield, Mass.
House for Hon. Wm. Dorsheimer, Buffalo, N. Y.
Insane Asylum, Buffalo, N. Y.
Exhibition Building, Cordova, Argentine Republic.
Brattle Street Church (now First Baptist), Boston, Mass.
High School Building, Worcester, Mass.
Cheney Block, Hartford, Conn.
Trinity Church, Boston, Mass.
Phoenix Insurance Company Building, Hartford, Conn.
Hampden County Court House, Springfield, Mass.
House for Mr. B. W. Crowningshield, Boston, Mass.
North Congregational Church, Springfield, Mass.
House for Mr. W. Watts Sherman, Newport, R. I.
State Capitol, Albany, N. Y.
Winn Library, Woburn, Mass.
American Express Building, Chicago.

The above were executed while Mr. Richardson was in partnership with C. D. Gambrill.

Sever Hall, Harvard College, Cambridge, Mass.
City Hall, Albany, New York.
House for Mr. F. L. Higginson, Boston, Mass.
Trinity Church Rectory, Boston, Mass.
Ames' Monument, Sherman, Wyoming Territory.
Store for Mr. F. L. Ames, Bedford street, Boston, Mass.
Store for Mr. F. L. Ames, Washington street, Boston, Mass.
Dairy Building, Boston & Albany R. R. Co., Boston, Mass.
Ames' Memorial Library, North Easton, Mass.
Ames' Memorial Town Hall, North Easton, Mass.
Railroad Station, North Easton, Mass.
Gate Lodge, F. L. Ames, North Easton, Mass.
Station for Boston & Albany R. R. Co., Auburndale, Mass.
" " " " Chestnut Hill, Mass.
" " " " Palmer, Mass.
" " " " South Framingham, Mass.
" " " " Wellesley Hills, Mass.
" Connecticut River " Holyoke, Mass.
Austin Hall, Harvard College, Cambridge, Mass.
House for Mr. Grange Sard, Jr., Albany, N. Y.
Crane Memorial Library, Quincy, Mass.
House for Mr. N. L. Anderson, Washington, D. C.
Billings Library, Burlington, Vermont.
House for Hon. John Hay, Washington, D. C.
House for Mr. Henry Adams, Washington, D. C.
Converse Memorial Library, Malden, Mass.
Newton Baptist Church, Newton, Mass.

The following buildings were under construction at the time of Mr. Richardson's death.

Allegheny County Court House and Jail, Pittsburgh, Pa.
Store for Mr. Marshall Field, Chicago, Ill.
Armory Building for Estate of J. J. Bagley, Detroit, Mich.
Cincinnati Chamber of Commerce, Cincinnati, Ohio.
House for Mr. Franklin MacVeagh, Chicago, Ill.
" " J. J. Glessner, Chicago, Ill.
" " B. H. Warder, Washington, D. C.
" " R. T. Paine, Waltham, Mass.
" Prof. E. W. Gurney, Beverly, Mass.
" Dr. H. J. Bigelow, Oak Hill, Newton, Mass.
Station for B. & A. R. R. Co., Washington street, Newton, Mass.
" " " " Beacon street, Newton, Mass.
" " " " Boylston street, Newton, Mass.

Notes of a Winter Vacation.*

BY E. H. TAYLOR, ARCHITECT, DES MOINES, IOWA.

OF all that was seen and learned in a trip going over three thousand miles and visiting twenty-five cities in six weeks of short winter days, it will be out of the question, in this paper, to speak of otherwise than by leaving out detail, simply sketching a few special and striking points.

An important thing to be remembered whenever one visits a strange place, is the advantage and wisdom of at once and without fail, calling upon a professional brother, and gaining from him hints and assistance in seeing the best of the locality. To those who have never attended a convention of the profession, it may be well to say; if possible, never let an opportunity for attending, pass unimproved.

Added to the pleasure and profit of meeting western architects at the St. Louis convention, was that of visiting eastern architects in their offices. In simple, social intercourse one often gains an idea that years of experience in the beaten track of private practice might not have developed.

Besides the mercantile, the public buildings and the new residences of St. Louis, the fair grounds, with their appliances, and particularly the grand stand, well repay visiting. Nor can an hour be more pleasantly spent than in going through the Missouri Glass Company's works if fortunate enough to see the formation of a bull's-eye.

Not far from Cincinnati, an entire city upon a well digested system and design, similar to that of Pullman near Chicago, is being built.

It was on the Cincinnati bluffs that a simple variation in locating a group of cottages was stumbled upon, which might easily be adopted in many places with desirable effect. A semicircular drive was described with a main street as a diameter. Half a dozen cottages were built facing this curve, and in the center was a miniature park, all of which gave a faint suggestion of the charming places in New England villages.

The grand scale upon which Washington City was laid out, with its broad streets and diagonal or radiating avenues and their spacious intersections, gives opportunity for the erection of large buildings where they can be seen from a distance, permitting satisfactory viewing.

The Johns Hopkins Hospital, at Baltimore, should be visited by all desirous of seeing good work of that kind.

It is a gratification to see galvanized iron supplanted by copper in cornices, turrets, bay-windows and dormer work, where, without paint a character and individuality, not otherwise obtained, is insured.

Pressed brick has to a great extent given place to common and fire-clay brick of standard and irregular sizes and varied colors, producing picturesque, and at the same time, good, artistic walls.

Effective designs are wrought with hard burned, dark toned arch brick, combined with lighter shades or softer brick. In fine pressed brick walls, substantial work is done by laying them with good sized, sensible mortar joints, the facing bounded with the backing by regulation courses of headers, without sacrificing straightforward, sound construction to fashion. Interior walls in libraries, schools and audience-rooms, stairways, halls, corridors are simply finished with common, pressed and glazed brick, make a finish varied and pleasing, combined with freedom from the tinder box bath and plaster work.

In many office buildings, vestibules, halls and corridors are wainscoted and trimmed with marble to the exclusion of all possible woodwork.

Wrought and cast iron, in simple but effective and artistic designs, is coming more and more into use. Audience-rooms are to be found where simple but special and carefully considered means have been adopted, securing comfortable and satisfactory heating and ventilation.

Particularly interesting is the new method of forming foundations without dimension stone, but with a gridiron work of steel rails and concrete which proves cheaper and far superior in many ways to the old method.

In Chicago, a novel procedure was the roofing-in of the whole building site for a mammoth business block. The excavation had been completed in the fall and all inclosed with walls of wood a few feet above the sidewalk and a flat pitch roof constructed. This permits the laying of the foundations and bringing the basement work up to the sidewalk line, all being carried on continuously and with comfort through the winter in spite of cold waves, blizzards and all inclement weather.

The art museums, with their lovely works, which nearly every large city possesses, furnish one with endless entertainment; but of these, and the many new features of exterior and interior finishing, furnishing and decoration, it will be impossible to speak in detail.

No better entertainment is to be found than a visit to the Japanese Village in New York, where, in a large room, are shown Japanese artisans at their work. Here are seen the cabinet maker, bronze worker, cloisonne manufacturer, coppersmith, silk worker, wood carver, painter, athletic feats, etc. It is a wonderfully interesting revelation of the secrets of Japanese art.

After looking over the architectural work of the sections visited, one point was particularly noticeable. Everywhere had there been a visible strife for the odd. Good construction, durability, propriety, consistency and common sense had been violated. This crazy-quilt work, with its unrest, has resulted in a reaction, and in some places can be seen a return to the simple and substantial, where study has been devoted to the refinement of concentrated ornamental detail located where well proportioned masses and honest construction form a proper background, and enhance its effect.

It is a decided relief to visit the quaint old houses of colonial times, the honesty and simplicity of which have a charm foreign to what the American public dubs "Queen Anne."

The West is able to claim superiority in many ways, while behind the East in others. Although eastern work is done, as a rule, with less haste, in a more thorough and substantial manner, with greater study and refinement, yet the western architect, disheartened with the many trials to his artistic feelings, will find similar examples and results exist in the East, and so can pick up crumbs of comfort.

To a candid and unbiased mind will also come the conviction that, not always is the artist of renown to be relied upon to produce only successful designs and execution.

It is like meeting an old friend to run across a building a perspective or elevation of which you remember having seen published in some journal.

To one passing his time in a prairie country, a trip through the mountains and hills, and over and along the streams of New England, furnishes a fascinating charm to the eye. He is amazed at the frequency of the mills and factories, driven by the power that tumbles so wildly over the rocks of these water courses.

These are a few of the host of noticeable, interesting and profitable features of a ramble, pleasant remembrances of which will lighten and inspire the labors of many coming weeks.

Some Recent Terra-Cotta Work.

CALIFORNIA shows a strong disposition to change from the unsubstantial, although not unpicturesque frame building of the past and imitate the East in the general adoption of brick and terra-cotta. It has been demonstrated that fine modeling clays can be procured in the state, and now, enterprise, in the shape of Chicago men, both with capital and practical experience, has taken hold of the work of producing this artistic material. The pioneers of this are the firm of Gladding McBean & Co., with head office at Sacramento and works at Lincoln. They have in charge of their modeling Mr. F. Marion Wells, the noted sculptor, and the work executed is said to equal in material and execution any terra-cotta work in the country. The largest terra-cotta contract yet attempted in California is now being executed by this company for the Pioneer Hall building at San Francisco by Architects Wright & Sanders. The sketches for the terra-cotta, which are entirely of a memorial nature, were made by Architect Wright, and are varied and exceedingly realistic. Major General Fremont appears in heroic size; an argonaut panel, depicting an immense sea bird finding a resting place after a long struggle with wind and wave, illustrative of the first pioneer, are among the most noted. Three panels will illustrate in high relief the passage of early emigrants overland. "The Parley" shows the meeting with hostile Indians; "The Camp," the rest at sunset, and "The Arrival," the joy of the travelers as they look from the last mountain wall over the foothills to the fertile plains beyond. Then in two panels, 2½ by 17 feet, is memorialized the, to Californians, famous Bearflag war, when General Fremont led his handful of troops against the Mexicans. The panels show the vigorous charge and the victory. Likewise strongly drawn and executed are two panels which all old "forty-niners" will look upon as memorials of their experiences. In one the gold digger, sitting by his fire with his frying-pan in his hand, cooking his evening meal, is overtaken by sleep, and for a moment dreams of home, the dream appearing in indistinct relief upon the background of the picture. The other panel, with equal strength, shows the home folks gathered around the supper table, reading a letter from the absent one. Numerous smaller panels in the way of heads of animals, fruits, flowers, etc., are being executed, and the building when finished will do much toward showing to residents of the Pacific coast the beauty and architectural adaptability of terra-cotta.

THE Northwestern Terra-Cotta Company send the following, and say: "We enclose herewith a list of buildings for which we are now manufacturing terra-cotta, and kindly ask you to give same a suitable place in your next issue. At the same time will inform you that the demand for our red and brown semi-glazed terra-cotta is such this year that we were obliged to buy the works on corner West Fifteenth and Laffin streets, and build two new kilns at our works on corner Clybourn and Wrightwood avenues, giving us in all fourteen kilns, and enabling us to supply our clients with usual promptness. The following is the list: I. Beidler's building, J. J. Flanders, architect; Phoenix Insurance Co's building, Burnham & Root, architects; Peter Schoenhofen Brewing Co's building, A. A. Cudell, architect; A. R. Meyer's residence, Kansas City, Mo., H. Probst, architect; G. B. Young's residence, St. Louis, Mo., Ramsey & Swasey, architects; Chicago, Milwaukee & St. Paul Railway Co's depot, Milwaukee, Wis., E. T. Mix & Co., architects; Public Library building, Dayton, O., Peters & Burns, architects; Insane Asylum, Toledo, O., E. O. Fallis & Co., architects; Central Safety Deposit Co's building, Burnham & Root, architects; Gustave Hottinger's residence, Lake View, Ill., J. H. Huber, architect; New Cass Hotel, Detroit, Mich.; A. A. Andresen's residence, Davenport, Ia., F. G. Clausen, architect; Raynold & Churchill's building, Burlington, Ia., C. A. Dunham, architect; Hendrick's School building, J. J. Flanders, architect; Chute's building, Minneapolis, Minn., G. M. Goodwin, architect; B. McLean's building, Kansas City, Mo., A. Van Brunt, architect; Hodgson & Son, Minneapolis, Minn., Hodgson & Son, architects; New High School building, Chicago, J. J. Flanders, architect; H. W. Hayes' building, Ann Arbor, Mich., Rudolph Benz, architect, Mobile, Ala.; Fairfield School building, Chicago, J. J. Flanders, architect; S. A. Crozer's block, H. B. Seeley, architect; Jno. Pauly's building, J. H. Huber, architect; E. A. Mathieson's building, F. Bauman, architect; Henry Reick's building, W. G. Barfield, architect.

WE learned too late to notice the fact, in our last issue, that the New York Architectural Terra-Cotta Company had completed its new works at Ravenswood, Long Island City, and was now ready to take and execute orders for all shades and kinds of architectural terra-cotta. The new company was incorporated under the laws of the State of New York, on the 23d day of January last, and began at once the erection of its works. On Saturday, April 24, the last brick was laid. In forty-six actual working days, a building, 177 x 130 feet, six stories in height, and containing more than a million of brick, had been erected, in spite of very inclement weather, and great difficulty in obtaining material. In addition to the building proper, there had been built four kilns, containing several hundred thousand brick, and capable of turning out one-half the capacity of the factory. Four more kilns have already been commenced, and will be

* Paper read before the third semi-annual meeting of the Architectural Association, of Iowa, January 13, 1886.

pushed rapidly to completion. When these are finished, the company claim that they will be able to turn out a kiln of work a day, or about \$600,000 worth of work a year, with large and well-equipped works for the manufacture of terra-cotta, with a picked corps of skilled operatives in every department, headed by that veteran clay-worker, James Taylor, so well known for his productions in the past, in Chicago, New York, Boston, Philadelphia, and, in short, wherever terra-cotta is known and used. The New York company says it has embarked in this enterprise with the determination to put on the market a terra-cotta, superior in quality and artistic finish to any attained in the past, and also to do away with vexatious delays in the execution of orders.

Illinois State Architectural Association.

AT the July meeting, on the 1st instant, the subject of party walls was further discussed. In the absence of President Burnham, Vice-President W. W. Clay occupied the chair, and C. L. Stiles acted as secretary.

After reading the minutes of the previous meeting, the secretary said: The special subject for this meeting was the subject of party walls. A committee for the purpose of investigating the matter was appointed, and also a motion made and carried for that committee to report at this meeting. I therefore move that the subject of party walls be now discussed.

The chair: As I understand it, the committee is not able to make a final report.

Mr. Randolph: Mr. Boyington appointed a meeting of your committee at his office, but Mr. Sullivan, one of that committee, was called away from the city suddenly, which prevented our meeting. I would, therefore, suggest that we be granted further time, as I consider that it would hardly be advisable to take up the matter without first referring it to the committee.

Further time was granted.

Mr. Baumann, on behalf of the Committee on the Sanitary Bill, then read the following, prepared by Attorney Beach, as a groundwork for a bill to be presented to the General Assembly:

First. Governor appoint Board of Commissioners.

Second. Board to have jurisdiction in cities of more than ten thousand; to have power to establish rules not in contravention of law.

Third. Persons desiring to erect buildings must, before building, apply to board and present plans and specifications. If same is satisfactory to board, permit is issued. If not satisfactory, board give notice to party. Summon witnesses, hear evidence and determine matter from same. Permit to issue or to be withheld in accordance with conclusion of board from evidence.

Fourth. Board may administer oaths, etc.

Fifth. Act not to be considered to authorize construction of buildings in violation of any ordinance now in force.

Sixth. Board may appoint inspectors to ascertain whether building is being erected in accordance with plans, etc.

Seventh. Providing for alteration and repair of buildings, etc.

Eighth. Penalty for erecting buildings in cities of ten thousand inhabitants without permit.

Ninth. Enforce the penalty.

Very truly, JAS. W. BEACH, Att'y.

The chair called attention to the fact that O. J. Pierce had been requested to present a set of formal questions upon party walls, and called on that gentleman for his report.

Mr. Pierce: At the last meeting, I had in my mind some points relative to line walls, and thought they might be considered in connection with party walls at some subsequent meeting. At the suggestion of President Burnham I agreed to prepare some questions, and, though incomplete in detail, I will, if no other business is before the meeting, state the substance of them.

The chair: I think it would be well that they be received.

Mr. Pierce: I would suggest the following points for discussion relative to line walls:

1. As to the common practice of extending footing, course or courses beyond the boundaries of the property being improved, in order to keep the center of gravity as nearly as possible in line with the center of the footings.

2. Would a *verbal* notice (from the owner or agent of adjoining property) not to extend footings upon his property subject an *architect* who should disregard the request to an action for damages; or would it involve the owner, or both, and would that depend upon whether any damage had been sustained? In other words, admitting the trespass, would an architect be subjecting himself or his client to the annoyance and cost of litigation with a possibility of *constructive* damages by doing what seems to be a well nigh universal practice?

3. Admitting the necessity, or at least the *urgent desirability* of so extending footings, and presuming that the *common law* would prohibit its practice, is it expedient to attempt to secure a law which shall permit that to be done legally, which is now done without sanction of law, and thus disarm malicious prosecution in case of unfriendly neighbors?

4. Are there any constitutional considerations that would be likely to defeat the operations of such a law; or, on the other hand, would the recognized principle, that the greatest good should be paramount to individual rights, be held to justify such a law? This would seem to be a question for constitutional lawyers, and, in my judgment, is an important one.

5. If the owner of adjoining property can, after the foundations have been built (*or partially built*) extending upon his property, compel the *architect* or the owner of the offending wall to remove the trespassing portions of said wall *at once*, or can he obtain damages (constructive or real) for said trespass, and what would be the measure of such constructive damages? It would seem to be desirable that the owner of the wall could legally insist that the wall should remain intact until such time as its trespass involved the question of *real*, not constructive damages.

6. Presuming that the law would compel the owner of the offending wall to remove the trespassing portions of the footings, at least whenever they were actually in the way of improvements of adjoining property, *if legally* notified to do so, the question is raised: Suppose the owner or contracting builder, or architect of the last improvement should voluntarily,

or without objection or demand for compensation, cut off said footings, would such owner or contractor *then* have a valid legal claim against the owner of the trespassing wall for such cutting; and, on the other hand, would he be liable for any injury done to the first wall through lack of ordinary care or skill, in making the same safe?

7. Concerning the most approved method of dealing with projecting footings of buildings that have come to their final bearing, when building against them, whether to cut off the projections, build upon them or around and over them, without actual bearing upon them.

8. In building against old walls, whether it is better to build solid against them, or with only occasional points of contact, leaving, if possible, a slight space between the walls not occupied by brick and mortar.

The chair: If some one will make a motion in regard to the questions which Mr. Pierce has brought up in connection with line walls, I shall be glad to hear from him.

Mr. Stiles moved that they be taken up in sections, which was carried.

Section 1 was read and passed without comment.

Section 2.—Comment. The chair: The question is as to whether a *verbal* notice, or some other notice be given.

Mr. Baumann: A verbal notice.

Mr. Holabird: I think the owner would be directly responsible for anything that he would have to pay.

Mr. Pierce: The point in question is not so much to determine what the mind of the profession are in regard to the architects' responsibility in the matter, as the question of constructive damages; that is, unless real damages were shown, whether the architect, or owner, would be responsible if they had trespassed, and what measure of damages.

The chair: When you find the footings projecting upon you do you build against them?

Mr. Baumann: No, I have them cut off, no harm whatever is done. I take out say four feet right under and stick in my dimension stone two feet if necessary, fill and block it up. Then I have my footing right under.

Mr. Randolph: The practice that Mr. Baumann speaks of is one of general practice; but it is almost certain to ruin the building next to it; it is going to settle the foundation; the new foundation goes down and there is nothing left to support the old one. I have seen but one or two buildings of great size built next to a building that had its bearings in this way where they did not crack it. Several years ago, while practicing in St. Louis, I had occasion to build a packing-house there, where I went twenty-four feet below the surface. I notified the owner of the adjoining property that I was going to excavate, and that he should protect himself. He said: "Why, my dear sir, my property is six feet off your line, there is an alley-way at the side of your house!" I said: "I cannot help that, I am going to excavate to a considerable depth, and I have no doubt we will cave into your foundation." He said: "What depth are you going?" And I replied, "about twenty-four feet below the surface." He said, "he was not compelled to protect himself against excavation to that great depth." I said: "I do not know what the law in the matter is, I merely notify you that I am going to do it." The next morning he had men there to protect his interests, which he did at considerable expense. We laid the masts under to keep it propped up, filled and packed to the very best of our ability; and for a year or more that building did not show any damage whatever. I think it was about two years after, when this filling that we made at the side of our wall commenced packing, and cracked his building and made it utterly worthless, and we were fully six feet away. Now, I believe that we should have some kind of arrangement whereby we can build for the requirements of the time. The fact that you can go down twelve feet makes you no nearer the end. We should have some common understanding. Another thing, if we could not make a law, we could at least make some kind of regulation whereby city property could be subdivided and sold subject to such and such restrictions which would hold good for all time.

Mr. Pierce: I have several times resorted to the following expedient with considerable success—that is, where I find the footings projecting upon me, instead of cutting and instead of building upon them, I lay my foundations alongside of them, if they do not project too much; I then gradually batten over and build over, but not upon the projecting footings. Of course the center of gravity of my wall is off the center of my footings, but for all that I have had recourse to this expedient on several occasions with very good success.

Section 3. Read and passed without comment.

L. S. Buffington, a guest from Minneapolis, being called upon by the chair, said: "It is a common practice both in Ohio and Minnesota, that the neighbor is obliged to protect himself to the depth of twelve feet; that is, if you want to build and he is up six feet, he is obliged to protect himself to the depth of twelve feet. I think, that solves the line contract question without trouble."

Mr. Treat: I move that these matters, being of a legal nature, be all referred to the committee on party walls, that they may consult with some legal authority; and that Mr. Pierce be added to that committee.

The motion was carried and the meeting adjourned.

THE tensile strength of Morton's metal cable chains, hereafter, will be as follows: No. 110, 1250 lbs.; No. 10, 950 lbs.; No. 20, 800 lbs.; No. 30, 675 lbs. Champion chains: No. 1, extra heavy, 650 lbs.; No. 2, extra heavy, 450 lbs.; No. 1, Regular, 550 lbs.; No. 2, Regular, 360 lbs. Steel cable chains: No. 6, 3,000 lbs.; No. 5, 2,300; No. 4, 1,750 lbs. They claim the No. 30 cable chain will outwear the Champion or any similar chain as two to one, and will guarantee it for ten years. The average tensile strength of Champion chains, proven by test by authoritative firms, over others of a similar make, was 10 per cent. Morton's chains being less liable to kink, also claimed to be better finished and less in price. Their cable chains are 25 per cent stronger, cheaper and better finished than the imported or any other riveted chain in the market of the same weight.

New Publications.

STEAM-HEATING PROBLEMS; or, QUESTIONS, ANSWERS, AND DESCRIPTIONS relating to STEAM-HEATING AND STEAM-FITTING, from *The Sanitary Engineer*, with One Hundred and Nine Illustrations.

The Sanitary Engineer, while devoted to engineering, architecture, construction and sanitation, has always made a special feature of its departments of steam and hot-water heating, in which a great variety of questions has been answered and descriptions of the work in various buildings have been given. The favor with which a recent publication from that office, entitled "Plumbing and House-Drainage Problems," has been received suggested the publication of "Steam-Heating Problems," which, though dealing with another branch of industry, is similar in character. It consists of a selection from the pages of *The Sanitary Engineer* of questions and answers, besides comments on various problems met with in the designing and construction of steam-heating apparatus, and descriptions of steam-heating work in notable buildings. The book will prove useful to those who design, construct, and have the charge of steam-heating apparatus. The contents include: *Boilers*—On blowing off and filling boilers. Where a test-gauge should be applied to a boiler. Domes on boilers: whether they are necessary or not. Expansion of water in boilers. Suffocation of workmen in boilers. On the effect of oil in boilers. Proportions for rivets for boiler-plates. Accident with connected boilers. A supposed case of charring wood by steam-pipes, etc. *Value of Heating-Surfaces*—Calculating the radiating-surface for heating buildings—the saving of double-glazed windows. Amount of heating-surface required in hot-water apparatus boilers and in steam-apparatus boilers. Calculating the amount of radiating-surface for a given room, etc. *Radiators and Heaters*—Hot-water radiator for private houses. How to use a stove as a hot-water heater. Relative value of pipe on cast-iron heating surface. Warming churches, etc. *Piping and Fitting*—Piping adjacent buildings: pumps *vs.* steam-traps. Expansion of pipes of various metals. Advantages claimed for overhead piping. Cause of noise in steam-pipes. One-pipe system of steam-heating. How to heat several adjacent buildings with a single apparatus, etc. *Ventilation*—Window ventilation. Ventilation of Cunard steamer "Umbria." On methods of removing air from between ceiling and roof of a church, etc. *Steam*—Economy of using exhaust steam for heating. Effect of using a small pipe for exhaust steam-heating. Explosion of a steam-table, etc. *Miscellaneous*—Heating water in large tanks. Heating water for large institutions and high city buildings. On heating several buildings from one source. Filters for feeding house boilers. Will boiling drinking-water purify it? Methods of graduating radiator service according to the weather. Preventing fall of spray from steam-exhaust pipes. Steam-heating apparatus and plenum (ventilation) system in Kalamazoo Insane Asylum. Heating and ventilation of a prison. Low-pressure hot-water system for heating buildings in England (comments by *The Sanitary Engineer*). Steam-heating apparatus in Manhattan Company's and Merchants' Bank Building, New York. Boilers in Manhattan Company's and Merchants' Bank Building, with extracts from specifications. Steam-heating apparatus in Mutual Life Insurance Building on Broadway. The setting of boilers in Tribune Building, New York. Warming and ventilation of West Presbyterian Church, New York City. Principles of heating-apparatus, Fine Arts Exhibition Building, Copenhagen. Warming and ventilation of Opera House at Ogdensburg, New York. Systems of heating houses in Germany and Austria. Steam-pipes under New York streets—difference between two systems adopted. Published by *The Sanitary Engineer*, 140 William street, New York. \$3.00, post-paid.

FOR the past five years The Century Co. has been engaged in preparing a dictionary of the English language of which Professor William D. Whitney, of Yale College, is editor-in-chief,—the purpose being to make a more comprehensive work than has yet appeared in popular form, to include, in addition to a very full collection of individual words in all departments of the language, all technical phrases, not self-explaining, in law, the mechanical arts, the sciences, etc. Indeed, it is designed to make this dictionary so complete in its definitions of all branches of science and art that even the specialist will need nothing further. The number of "new" words in many of these departments is said to be surprisingly great. The dictionary will have also a remarkably complete system of cross-references, and will embody in itself a dictionary of synonyms which will add greatly to its value. A prominent feature of the new work will be its encyclopedic character. Its definitions will be fuller and more complete than is customary in works of this kind; it will go further into the various uses and meanings of words, and in many cases will give full explanations and descriptions of matters historical, scientific, legal, mechanical, etc. Quite an army of persons has been at work for several years reading standard American and English books in search of quotations, of which an immense number will be used. American writers, such as Emerson, Lowell, Hawthorne, Irving, Whittier, Longfellow, Holmes, and our distinguished scientists, are receiving special attention. The publishers are taking great pains with the illustrations, of which there will be about 5,000. They are employing the same class of artists and engravers that contribute to their magazines, and they mean to make the result something hitherto unknown in the world of dictionaries. Each picture as it is drawn, and again after it is engraved, is submitted to the specialist in whose department it belongs, that its scientific accuracy may be guaranteed. Of these specialists there are about thirty, working at their homes in New York, Baltimore, Washington, New Haven, Cambridge, and elsewhere, each being individually responsible for all the definitions in his department, and all under the general supervision of Professor Whitney, who will himself have special charge of the definitions in the department of philology, in which he is famous, and of the spelling and pronunciation. It is understood that he will not adopt a phonetic method of spelling, though on theoretical grounds he is known to favor it. Professor Whitney is not only recognized as the most eminent American philologist, but the London *Saturday Review* has recently pronounced him the foremost English-speaking scholar in his department. In addition

to the specialists, a force of about fifty assistants has been busy collating material and preparing copy for the printer, the final work on which is done with type-writing machines at The Century Co's office. The inception of this scheme was a desire to improve and Americanize the "Imperial Dictionary" of Great Britain, brought out in this country by The Century Co. five years ago. As the work of altering it advanced, it became apparent that a better plan was to begin *de novo*, and so the far greater work of making a new dictionary of the English language was begun. Two or three years must still elapse before it will appear, and in the mean time opportunity is offered by the publishers to those interested in helping on so useful a work to contribute material and suggestions to it. Much valuable matter has been received in this way from many scholars and practical men all over the world. It is estimated that upward of a quarter of a million of dollars will be spent upon The Century Dictionary before it is ready for publication. The work of typesetting and printing will be done by the De Vinne Press, in the new building into which they have recently moved.

COTTAGES, portfolio, consisting of twelve finely lithographed plates containing twelve designs of low cost homes, with forty-three illustrations and explanations, by D. S. Hopkins, architect. Price \$1, postage free. Fred. A. Hodgson, publisher, 294 Broadway, New York. These designs are intended to afford suggestions to those interested in building convenient, comfortable, and artistic homes, ranging in price from \$1,000 to \$3,000. The plans show an economical arrangement of room.

Our Illustrations.

Houses for Henry Corwith, by Bauer & Hill, architects, Chicago.

Amesfield tower, Dumfriesshire, Scotland. Sketched by C. F. Jobson, Chicago.

Accepted design for City Hall at Hamilton, Ontario, by C. W. Mulligan, architect, Hamilton. Walls of pressed brick with freestone trimmings. Cost about \$100,000.

Four houses for Thomas Cunningham, on Chicago avenue, Chicago, by Addison & Fiedler, architects. Walls of Indiana pressed brick with blue Bedford and terra-cotta trimming. Interior finish of whitewood, stained; cost about \$25,000.

Residence for Mrs. M. Louise Whitney, on Jefferson avenue, Hyde Park, Ill., by M. L. Beers, architect. The size of house is 34 by 66 feet, cellar, two stories and attic, with rooms finished in cellar and attic. The exterior is of Lemont stone from ground to top of first story windows, rough rockfaced work, and the chimneys are built of the stone; balance of exterior is shingled, using dimension shingles. The interior is to be finished in selected red oak, selected black birch and clear pine, and finished to a furniture polish. The house has all modern conveniences.

Cottage Grove School building, Chicago, by Flanders & Zimmerman, architects. Eight rooms, with an assembly hall in the attic. The materials are pressed brick, Bedford stone and terra-cotta. The building is heated by steam. The natural system of ventilation is used, each room having a separate inlet for fresh warm air, and exit for foul air extending through the roof. Both direct and indirect heat are made use of, by means of radiators in the basement and coils in the rooms. The building is 66 by 160 feet ground area, and the assembly hall 40 by 90 feet. The basement rooms are used for playrooms and water-closets. The school occupies the rear portion of the grounds and a fifteen room school is in front.

Cincinnati Art School, by Jas. W. McLaughlin, architect. This building is now being constructed upon the grounds adjoining the New Art Museum in Eden Park. It measures 82 by 106 feet, with a semi-circular projection on the west, 35 by 64 feet, covering an area of 10,810 square feet. The walls are of blue limestone, with Longmeadow brownstone dressings and the roof will be covered with red Akron tiles. The semi-circular lecture-room, 60 feet in diameter, is approached from both the ground floor and second floor, the seats being arranged in amphitheater form. The room for drawing from antique casts and models occupies the center of the upper story and is 46 by 101 feet and 23 feet high, lighted by clear-story windows and a large skylight on the north side; on either side of this apartment are ten separate studios. The building will be thoroughly fireproof throughout, iron beams and tile arches being used for the floors, and the roof framing will be entirely of iron construction. The staircases are to be of iron with slate treads and landings. The cost of construction, some \$80,000, will be entirely the gift of Mr. David Sinton.

Mosaics.

THOS. KELLY & BROS., of Chicago, are introducing their self-acting closets in the Western Hotel at Sacramento, Cal.

AN automatic sash balance which also acts as a weather strip, is used in the East. It is made by Wm. G. Anderson, of Boston.

THE Architectural League, New York, will visit Albany on the 10th instant and inspect the Capitol building, the City Hall and other points of architectural interest.

SAMPLES of Dexter Brothers' English shingle stain, in fifteen different shades, have been received. A Boston architect, who has used this stain extensively, recommends it highly.

SAMUEL I. POPE & Co., of Chicago, were awarded the contract for steam heating of the Texas Capitol building. Four firms bid on the work, the bids ranging from \$40,000 to \$47,500, which was that of Messrs. Pope & Co.

A SUBSCRIBER writes: "I will pay one dollar each for numbers 2 and 3 of Vol. II of THE INLAND ARCHITECT AND BUILDER." Any of our subscribers wishing to dispose of the above numbers, at the price named, will oblige by sending to The Inland Publishing Co., 19 Tribune Building, Chicago.

A FIRE occurred on the 28th ult. in the sheet metal works of Knisely & Miller, 129 and 131 South Clinton street, Chicago. The damage was principally to cornice and roofing patterns, and is estimated at \$8,000. The building was damaged about \$5,000. No serious interruption to the extensive business of the firm resulted, and the losses are fully covered by insurance.

THE *Wagon-Maker* is the style of a new publication issued monthly by Coyne & Co., publishers of the *Western Manufacturer*, and edited by one of the ablest general writers of the day, Mr. John W. Sickels. The paper is one that should be in every wagon and carriage shop in America. The initial number showed great ability and contained an immense amount of useful matter.

THE Hecla Architectural Bronze and Iron Works, through their Chicago agent, Richard Robins, have received the contract for the elevator fronts in the ten stories of the Adams' Express Building at Chicago, and the stairwork, rails and elevator guards for the new Plankinton House in Milwaukee. The work will be finished in their best style of Electro-bronze and Bower Barff work.

CUTTING & DELANEY, of Buffalo, are manufacturing a large quantity of designs in Japanese lattice or fret work. In their circular, just issued, they present sketches of grills, panels, etc., in fret work, in combination with drapery, stained glass, etc., and some very effective designs for ceilings. This firm execute from special designs when furnished, or when made by them in any style, or in any wood ordered.

WM. T. BLUNT, C. E., has established an office at 413 Montgomery street, San Francisco, for the management of the western business of the Durham House Drainage Co., of New York. Mr. Blunt is a sanitary engineer of some prominence in the profession, and in introducing the Durham system of house drainage on the Pacific Coast will do much toward increasing the healthfulness of California cities.

DR. F. L. ATKINSON, formerly of Chicago, has recently been elected health officer of Sacramento, California. Dr. Atkinson is a graduate of Rush Medical College, class of 83, and has spent some time since then in this city in the study of sanitary matters. He is a promising young man, and will fill the position with credit to himself and the city which has honored him with the responsible work of caring for the general health.

OWING to the success of Alfred C. Kemper, of Chicago, in introducing and applying the Ainsworth Boiler and Pipe Covering, he has been given additional territory. Besides Illinois he now controls the Ainsworth covering for Michigan and Missouri, and has the general agency for the Northwest. Mr. Kemper is establishing agencies in Michigan and Missouri. Under his management the Ainsworth covering is making an excellent record in the West.

M. J. McGRATH, who has become more generally known, perhaps, than any other public officer in Chicago, as superintendent of mails, has formed a copartnership with Chas. D. Stone, formerly well known as chief examiner in the United States Appraiser's Office at Chicago, for the purpose of transacting a general custom house brokerage and forwarding business. A firm more competent, through long experience, and in merited possession of a larger share of public respect and confidence, would be hard to find.

CICERO HINE, who has been identified with the profession in Chicago for a number of years, has opened an office at 81 Clark street, room 24. Mr. Hine was, for several years, head of the office of the late architect, G. P. Randall, and was also for a shorter period in the office of the government architect of Canada, and has a practical experience which will recommend his services, while his artistic and designing ability, which has already received marked recognition locally, will also aid in giving him a deserved prominence in the architectural profession.

THE BURLINGTON ROUTE (C., B. & Q. R. R.), has more through-car lines than any railroad in the world. It is the only road selected by the United States Government to carry the fast mail west of Chicago. It carried on its line the first international train from the City of Mexico to Chicago. For its superior excellence it was patronized by the main body of the Knights Templar and Grand Army of the Republic journeying to San Francisco and Denver in 1883. For years the great army of tourists, business travel and home-seekers in the largest majority have traveled over its lines. It is, in fact, the principal line to reach all points in the great states and territories west of Chicago.

WM. PAUL GERHARD, speaking in *Good Housekeeping* upon the subject of water-back explosions from freezing, says: "It should be understood that neither vacuum nor safety valve, nor the expansion pipe of the tank supply system render the system free from the danger of this accident. The only sure way to prevent the occurrence of such disaster is to keep, on cold nights, a fire going in the range, so as to maintain the circulation of water through the water-back. If the fire should accidentally or carelessly be allowed to go out in winter time, it may be a wise precaution to ascertain in the morning, before lighting a fire, if the water is frozen in the connecting pipes between the boiler and the water-back." This should be cut out and pasted on the hot water boiler in every kitchen in the land.

"WHAT a wind! 140 miles an hour at Mount Washington, from 50 to 90 miles at various places the country through. It seemed, too, as if it would never blow out. Then it was so fitful the weather vanes couldn't keep up with the changes. No wonder such large numbers not well made and the strongest tumbled down. Surely, said a friend of ours, I thought my elegant big vane must go, buzzing as it did like a top in those fearful gusts. But it stands yet. * * * "This," says the New York *Mercantile Journal*, "was the tribute paid to the excellence and permanence of the work done by Thos. W. Jones, of New York city." Mr. Jones has recently issued a complete catalogue which can be had on application, and which comprises probably the largest assortment of goods in his line of any other house in the world.

A CIRCULAR letter which architects generally have received is as follows:

CHICAGO, June, 1886.
Gentlemen.—In order to facilitate our trade in Chicago and the Northwest, we have opened a branch house and warerooms at 42 & 44 West Monroe street, where we propose to keep on hand a sufficient stock to represent the Bundy Radiator in all its styles. Every opportunity will be provided to acquaint customers with the many advantages of the "Bundy" over other styles of radiators in use, which, upon examination, can be easily perceived. Hoping the establishment of this house will prove a benefit to our customers and that we may have the pleasure of seeing them at this address, we remain, very respectfully,
A. A. GRIFFING IRON CO.
T. C. PERRY, Western Manager.

Mr. Perry, who has assumed control of the western interests of this company, is in every way deserving of the confidence of architect, builder and owner, and the radiator he represents has become well and favorably known throughout the country.

THE Indianapolis Encaustic Tile Works, which has been in the hands of receiver Mothershead for two years, and during that time exceptionally well-managed, has been sold, the new company consisting of J. J. Cooper, president; Jackson Landers, treasurer; both of Indianapolis, and John Picken, of Tipton, Ohio, secretary. This plant is the largest in the line of exclusive encaustic tile making in the country, their plant including four kilns, with capacity for 5,550 feet of tiles each, one of 8,000 to 9,000 feet capacity, one vitreous kiln of 1,000 feet capacity, and eight enameling and glazing kilns. The works employ one hundred and fifty hands, and the manipulation of clays, which are largely from Green and Clay counties and from many foreign sources, engage a large number of skilled artists and designers. As a western product these works are deserving of the greatest encouragement and success, their capacity being equal to the prompt execution of any order that can be called for. The members of the new company are gentlemen well-known to the business men of the state and should meet with success in the carrying on of these works that have already made a reputation for the excellence of their product.

At the Ann Arbor meeting of the American Association for the Advancement of Science, the following communication was presented, which gives a simple method of fixing crayon drawings on paper, by F. P. Dunnington, professor of analytical chemistry, University of Virginia:

It is often desirable to preserve for future use such drawings as are usually made upon the blackboard. All such drawings may be executed with ease and rapidly upon unsized paper, employing the colored crayons which are made for blackboard use. The colors red and blue are most conspicuous; other colors answer fairly. As to paper, moderately heavy, unsized manilla answers well; even white wrapping paper may be employed, but it would be too easily torn. In the course of making the drawing, a line may be fairly erased by brushing it lightly. A very dilute varnish is made by adding to one part of Damar varnish twenty-five parts of spirits of turpentine; this is best preserved in a corked bottle. To fix the drawing, a quart or more of the varnish is poured into a trough (made of a piece of tin guttering) a little longer than the width of the paper, and the paper is drawn through the varnish, which may or may not flow over the upper side of the paper; the latter is then hung up to dry over night, and the drawing may be handled with no danger of blurring. The color of the paper is scarcely altered by the varnish. As to the amount of material: twenty pounds of paper require about three gallons of turpentine and one pint of Damar varnish.

Professor Simon H. Gage, of Cornell University, has made considerable use of the above process, and kindly furnishes the following notes which will enhance its value:

1. Brown, green, and the various shades of orange crayon are very useful, and for black the moderately hard crayons known as Conté à Paris are all that could be desired.
2. Water colors and fresco colors may also be used to good advantage where a great variety is needed.
3. For erasing, the filtering paper used by chemists has been found most efficient.
4. As white crayon marks are rendered almost invisible by the varnish, the drawings may be outlined with white. This is sometimes of considerable importance in making a complicated drawing.
5. In fixing, if one does not have a trough as mentioned above, the diagram may be hung up, and the varnish rubbed on the back with a mass of cotton or with a wide brush.
6. If it is desirable to add letters, figures, etc., to a diagram after it is fixed, such additions may be made in crayon, and then fixed by pressing a mass of cotton, wet with the varnish, directly upon the part; no blotting will occur unless the cotton be moved from side to side.

The above is sent out in a circular letter by the University of Virginia, dated November, 1885.

MISSION RIDGE.—A new panorama of the battles of Chattanooga has taken the place of the "Siege of Paris" in the American Panorama Company's building at Hubbard court and Wabash avenue, Chicago. The painting was begun in Milwaukee some months ago under the supervision of Messrs. Lohr & Heine, artists of note from Munich and Dresden respectively, the views of the battles as reproduced upon the great canvas having been taken from the sketches of Mr. Theodore R. Davis, the war correspondent and artist of *Harper's Weekly*. Judging from the opinions expressed and the explanations of the many who viewed the painting the work will be far more popular with the general public than was that which preceded it, if indeed it does not detract very largely from the now world-famous painting of the battle of Gettysburg, across the way. Nothing in the arrangement of the painting which could have added to its realistic effect has been left undone, and the arrangement of the foreground as it slopes away from the circular platform from which the scene is viewed to the base of the painting itself is certainly a triumph in this feature of the production. The perspective view of the mountain ranges, the wooded hills and the rugged landscape as seen in the painting has certainly been very cleverly executed. The towering sides of old Lookout, the rugged slopes of Waldon's Ridge and the spine-like crest of Missionary Ridge, upon which the forces of Thomas, Bragg and Anderson contended, are portrayed with a degree of realism and truthfulness of outline which can be appreciated the more by those familiar with the country in question. Col. John Mason Loomis, who was with Sherman's division, Maj.-Gen. Schofield, Gen. Williams and Chief of Police Ebersold, who was also with Sherman, were unanimous in their praises of the painting, both as to its accuracy and artistic features. Col. Gaut, who was with Gen. Thomas as that officer's chief engineer, addressed the spectators at length upon the details of the battles, as he had seen them, and finished by expressing the opinion that no truer picture of a battle scene had ever been painted.

A PARTY of Cincinnati architects and builders recently visited the quarries of the Hoosier Stone Company at Bedford, Ind. The party was under the leadership of the president of the company, W. C. Winstandley, Esq., and two of the directors, Messrs. T. V. and H. L. Thornton. The Bedford formation, situated in the central portion of Southern Indiana, covers an area of about two hundred square miles, in the center of which are situated the "Hoosier Quarries," and is pronounced by geologists to

be of velitic formation, which on inspection proves to be myriads of fossil shells pounded by the fury of the pre-historic ocean into almost microscopic atoms and solidified into one homogeneous mass by the cementing process of ages. The stone, which is either of a beautiful buff or gray, according to its position in the quarry, is perfectly even in tone, and freshly quarried pieces are soft enough to be cut with a knife, though hardening rapidly on exposure; a quality both admirably adapting it for purposes of carving, and rendering it impervious to the effects of weather. An absence of holes or flaws of any sort or iron stains adds to its beauty, considering this and the illimitable extent of the quarries it may not unduly be prophesied that they are yet in their infancy, though growing at present in response to a rapidly increasing demand. The cutting of the stone is accomplished by a small engine on a portable track, running two steam saws, which cuts to the depth of six and one-half feet in the solid rock, which is afterward drilled horizontally and split from the mother rock. Analysis of the rock by Prof. I. A. Tanner shows that, of the following stone: the Salem, Amherst, Bowling Green, Mt. Sterling and Virginia granite, the Bedford, with the exception of the Virginia granite, shows the least loss upon exposure to alternate moist, heat and cold. Among the guests were: Architects, Messrs. Chas. Drach, Smith & Forbush, H. E. Siter, E. Anderson, Emil Rueckert, Geo. W. Rapp, Jas. W. McLaughlin, S. E. Des Jardins, W. W. Franklin, D. S. Schureman, W. Martin Aiken and Plympton & Trowbridge; builders, Messrs. David Hummel, Isaac Graveson, John Boyle and Wm. B. Foster.

The Building Situation.

OFFICE OF THE INLAND ARCHITECT, July 10, 1886.

The industrial situation throughout the United States has very greatly improved within two or three weeks. Stated in the fewest possible words, the volume of business is quietly swelling. Clearing House exchanges show a steady expansion, manufacturing interests are in vigorous health, demand for all kinds of manufactured products is increasing, collections are good, commercial failures have fallen off 1,000 in round numbers as against same time last year and liabilities have decreased one third. There is a widespread improvement in building activity; confidence has been largely restored; capital is seeking investment. The list of permits in all the larger cities show up well and are in nearly all cases ahead of last year, east and west. The flow of capital westward and southward continues. Industrial enterprises are multiplying there, and railroads are opening up new and rich regions, and inviting capital, enterprise and labor. There is much of interest to note in all departments of activity. Builders are pushing with vigor. Boston, New York, Philadelphia, and more western cities furnish statistics of building operations which show that whatever apprehensions were entertained earlier in the year have been dismissed. The great demand is for homes. While costly residences are going up in large numbers, the greater enterprise is shown in the erection of smaller houses, costing from \$1,500 to \$3,000. Building material continues cheap and abundant. Lumber is in liberal supply at all points and firm in price. The South is furnishing large supplies of yellow pine in eastern markets, while Chicago and other white pine markets are shipping their usual enormous supplies east and west. The hardwoods are in quite active demand for interior finish and furniture manufacturing purposes. Prices for all kinds will very probably remain stationary.

Brick, stone-cement, lath, plaster, etc., are in abundant supply at all points. Possibly an exception could be made in the case of bricks at two or three points where states have obstructed production for a time, but just now the yards in all sections of the country are believed to be full. Prices are stationary.

The iron trade has escaped any serious upheavals. The question of wages has been settled for another year at Pittsburgh. The nailers have agreed to resume. Prices for all kinds of iron and steel are low. Nails \$2.00 at mills. A strike is under way among eastern puddlers. The mills making structural iron for building purposes are running full time all through the East, and managers are assured of an active season demand. Angles are \$1.90 and beams and channels, 3 cents. The mills on galvanized iron are all fairly busy.

Real estate is improving in value along the lines of roads leading into the Northwest. While there is much land offering, both rural and city, there is not enough to cause any serious depression in prices. Holders feel it is safe to hold, for the tide of population is in their direction.

Real estate in cities generally is firmly held. Much of it has been purchased this year for house building and manufacturing sites. Architects have felt the effects of summer strikes, but for all sources of information available, it is evident that they have recently received instructions to prosecute work to early completion. Investments in house building are profitable and encouraging.

The commercial situation is much better than a year ago. Failures are 20 per cent less. Liabilities reach only about fifty million dollars as against about seventy-five million dollars for the first six months of last year. Money-lending institutions are liberal, and rates of interest are low. New opportunities are being sought and enterprises hunting for work. Railroad building has been cautiously pushed for six months, less than 1,300 miles having been built, but from this date work will be pushed with vigor. The railroad companies have put each other under bonds to keep the peace and they are doing so with more or less general satisfaction. Things are moving on about as well as can be expected. Fortunes are not being accumulated perhaps with the same ease, but the country at large is growing in the right direction. The manufacturing industries are thriving. Production is not deluging the channels of trade. Prices are fairly remunerative; consumption capacity is expanding. Labor troubles have been overcome. Conservative leadership has the reins. The outlook is encouraging, but the era before us is not one wherein sloths or imbecility can win. In fact, greater energy is now more imperatively demanded. We append detailed reports from many points.

Synopsis of Building News.

Akron, Ohio.—Architects Weary & Kramer, report: Preparing plans for Business men's club rooms (Union Club); cost not estimated. Business shows indications of a more healthy condition in the building line; better prospects.

Ashland, Ohio.—Architects Weary & Kramer, of Akron, report: Preparing plans for brick and stone M. E. Church; cost \$20,000. Also for Presbyterian parsonage; cost not estimated.

Atlanta, Ga.—Architect Gust. E. Leo, reports: Building outlook for Atlanta somewhat less than usual but satisfactory. Building outlook for the surrounding country

is prosperous. In Atlanta, I have the following buildings: For Jas. L. Iverson, two-story and sub-basement residence, 44 by 75 feet; cost \$12,000. For G. A. Brockhard, two-story and basement brick store, 38 by 62 feet; cost \$10,000. For Z. Richardson, one-story frame dwelling, 42 by 60 feet; cost \$3,500. For Mrs. Schumann, one-story frame dwelling, 42 by 65 feet; projected. For John Domini, two-story and basement brick store, 40 by 55 feet; cost \$9,500; projected. For Burgo Smith, West-end, one-story frame dwelling, 45 by 70 feet; cost \$4,500; projected. Also several alterations, additions, etc.

Austin, Texas.—Architects J. N. Preston & Son report present condition quiet, prospects fair. For G. P. Warner, two-story frame, 34 by 55 feet; cost \$3,500; making drawings. For John Orr, two-story brick, 34 by 58 feet, slate roof; cost \$4,800; taking bids. For Mrs. N. V. Dladerrick, at Navasota, Texas, two-story frame, 22 by 36 feet; cost \$1,700; drawings under way.

Beloit, Wis.—Architects Josselyn & Taylor, of Cedar Rapids, Iowa, report: For H. Rosenblatt, frame residence; cost \$5,000; under way; Stevens & Voorhees, builders.

Benton Harbor, Mich.—Architect D. McKeller has prepared plans for village of Benton harbor, for a two-story engine house, 34 by 66 feet, with addition in rear 14 by 34 feet, one story, with iron cells for lock-up, to be built of brick and stone, trimmed with galvanized iron and brick; cost \$8,000; building to be commenced July 5. Contracts include closets and bath, stable, galvanized iron cornices, iron roof, iron channels, beams, etc., hardwood finish and tiling, steam or hot air heat.

Billings Mont.—Architect Byron Vreeland, of Miles City, reports: For E. W. Finn, two-story brick, shingle roof, etc.; cost \$3,500; plans under way.

Cass City, Mich.—Architect Jos. E. Mills, of Detroit, reports: For A. G. Berry, one-story residence, brick, stone trimmings, mansard roof, metallic shingles; cost \$2,500.

Cedar Rapids, Iowa.—Architects Josselyn & Taylor, report: Present condition is fair, but not as much work as last season. Outlook for future medium if what is talked of goes on, but things are very uncertain this year. For First Presbyterian Society, addition of 39 by 52 feet; with alterations to church building; cost \$13,000; under way; A. H. Connor, builder. Also six residences of various sizes, aggregating about \$7,500, in different stages of construction, most of them in Cedar Rapids. Also other were reported elsewhere in this issue.

Charleston, W. Va.—Architect James W. McLaughlin, of Cincinnati, Ohio, has prepared plans for Messrs. Ruffner Brothers, of Charleston, W. Va., for a four-story and entresol hotel, 100 by 157 feet, to be built of pressed brick, trimmed with Kanawha freestone; cost \$100,000; building to be commenced July 1. Contracts include closets and baths, copper cornices, electric bells and speaking tubes, slate roof, wood mantels, passenger and freight elevators, hardwood finish and tiling, steam power, skylights, steam heat, iron beams and brick arches over boiler room, and the cellar to be vaulted beneath rotunda. The entrance loggia to have groined arches supporting floor of ladies' balcony above.

Charleston, S. C.—Architect Gust. E. Leo, of Atlanta, Ga., reports: For Second Presbyterian Church, Sunday school building, 35 by 90 feet; cost \$11,800. For James Allan, three-story brick, iron front, store building, 25 by 110 feet; cost \$6,500; projected.

Chattanooga, Tenn.—The floods have interrupted building in this section to a great extent.

Architects Adams Bros. report: For D. B. Loreman & Co., on the corner of Eighth and Cherry streets, three-story and basement building, containing five stores; basement and foundation walls, limestone; superstructure brick, with terra-cotta and stone trimmings; tin roof, 60 by 243 feet; fronts on three streets, total frontage 363 feet; cost \$50,000; basement and first story up; D. J. Chandler, builder. For S. M. Winchester, corner of Market and Seventh streets, four-story and basement building, four stores and bank; basement exterior walls and foundation, limestone; superstructure, brick with terra-cotta and marble trimmings, tin and slate roof, 110 by 200 feet, fronts on three streets, total frontage 420 feet; cost estimated at \$100,000; excavations being made; other contracts not yet awarded. For J. W. Adams, corner of Eighth and Cherry streets, three-story and basement, eight stores; basement and foundation walls, limestone; superstructure, main front stone, other fronts brick with stone trimmings, tin roof, 100 by 220 feet, fronts on three streets, total frontage 420 feet; cost \$45,000; roof on; W. S. Adams, builder. For the trustees of the M. E. Church, block of two stores with apartments above, three stories high, 35-6 by 65 feet, near corner of Cherry street and Georgia avenue, foundations limestone, superstructure brick with stone trimmings; cost \$6,000; under way; H. C. Jackson, builder. For T. H. Boughton, ten-room frame dwelling; cost \$3,000; projected. For Willingham & Son, frame dwelling; cost \$3,500; under way; J. R. Taylor, builder.

Note—The above appeared in our April issue, credited by mistake, to Knoxville, Tenn.

Cheyenne, Wyo.—Architect J. S. Mathews reports: Very little doing, and little projected for the immediate future. A fine new depot is being built by the U. P. R. R. after plans of Van Brunt & Howe, of Kansas City, Mo. Our new Territorial Capitol building (D. W. Gibbs & Co., Toledo, Ohio, Architects) will probably be started this fall, which may have the effect of reviving business somewhat. Have the following buildings under way: For city of Cheyenne, hook and ladder house, two-story brick, 40 by 70 feet, pressed brick and stone front, bell tower 85 feet high, of brick and open timberwork, plumbing, etc.; complete, cost \$10,000; Geo. McSwain, builder. For Bristol & Knave, second story and new front to printing establishment, 16 by 60 feet; cost \$2,500; Geo. McSwain, builder. For J. W. Hammond, additions to store and residence; cost \$4,500; Halloway Bros., builders. For Geo. F. E. Warren, additions, etc.; cost \$3,000; under way; Geo. East, builder. For Chs. Boulter, improvements, etc., to residence; cost \$3,000; under way; Bradley, builder. Also miscellaneous small jobs; cost \$2,000.

Chicago, Ill.—The building situation is now almost undisturbed by labor troubles. The bricklayers, to secure a rise in wages, are sending men out of town in order to create a demand and consequent increase in pay. The carpenters have been troubled by a few lawless men intimidating workmen, but the Master Carpenters' Association is vigorously prosecuting all such offenders, and very little interruption is expected in future. The architects' offices display an unusual activity for this season, and wages remain the same, with some tendency to becoming slightly lower in the fall.

Architect J. J. Egan has prepared plans for the Church of the Holy Angels, for a two-story Assembly Hall, 50 by 135 feet, to be built of pressed brick, trimmed with limestone, to be located on Oakwood boulevard; cost \$18,000; J. A. Connelly, mason; F. D. Reynolds, carpenter; building under way. Contracts include slate roof, steam heat. For Mrs. Dore, for a three-story and basement residence, 25 by 80 feet, to be built of brownstone, to be located on Michigan avenue, near Thirty-third street; cost \$25,000. Taking figures for closets and bath, electric bells and speaking tubes, stained glass, slate and copper roof, iron beams, wood and marble mantels, dumb waiters, fireproofed, hardwood finish and tiling, skylights, steam heat.

Architect W. H. Drake has prepared plans for Mr. F. E. Spooner for two four-story stores, 40 by 90 feet, to be built of pressed brick, trimmed with stone, to be located 34 and 36 W. Madison street; cost \$25,000; contract not let. Contracts include closets, galvanized iron cornices, felt roof, iron channels, beams, etc., partly fireproofed, freight elevators, skylights. For Mr. James Frake, for a three-story flat building, 22 by 60 feet, to be built of pressed brick trimmed with limestone, to be located 613 Fulton street; cost \$5,000; Edward Slack, mason; Mr. Turner, carpenter; building under way. Contracts include closets and baths, galvanized iron cornices, electric bells and speaking tubes, stained glass, felt roof, marble mantels.

Architects Cobb & Frost have prepared plans for Mr. W. H. Hubbard for four-story flats, 43 by 86 feet, to be built of limestone, trimmed with brick and stone, to be located La Salle avenue, near Chicago avenue; cost \$16,000; John Angus, general contractor; building under way. Contracts include closets and bath, galvanized iron cornices, felt roof, marble mantels, dumb waiters, skylights.

Architect John F. Warner has prepared plans for Mrs. Guynor for a two-story flat building, 22 by 54 feet, to be built of brick, trimmed with stone, to be located on Aberdeen street; cost \$3,500; contracts not let. Felt roof, galvanized iron cornices. For Mr. C. W. Turner, for a two-story frame, 22 by 56 feet, to be built of wood, to be located on Prairie avenue; cost \$4,000; contracts not let. Contracts include closets and bath, stable, galvanized iron cornices, electric bells and speaking tubes, stained glass, slate roof, wood mantels, hardwood finish and tiling, skylights. For Mr. L. Livingston, for a three-story and basement store building, 25 by 80 feet, to be built of pressed brick, trimmed with terra-cotta, to be located State, near 34th street; cost \$12,000; contract not let. Contracts include closets and bath, electric bells and speaking tubes, stained glass,

wood mantels, tiling, hot air heat. For Mr. J. LeMessures, for a three-story and basement building, 60 by 60 feet, to be built of pressed brick, trimmed with terra-cotta, to be located 236 Park avenue; cost \$15,000; taking figures. Contracts include closets and bath, galvanized iron cornices, electric bells and speaking tubes, stained glass, slate, tin roof, wood mantels, tiling, skylights, hot air heat.

Architect H. Sierks, 89 Rand street, has prepared plans for Mr. A. Falter, for a three-story store and flats, 24 by 102 feet, to be built of Indiana pressed brick, trimmed with Lemont stone, to be located on corner Seventeenth street and S. Ashland avenue; cost \$8,000; Chas. Kupper, mason; building under way. Contracts include closets and bath, felt roof, galvanized iron cornices, iron beams, etc., hardwood finish, marble mantels.

Architect Julius Zittel has prepared plans for Mr. Fr. Ritter, for a three-story and basement flats, 23 by 55 feet, to be built of Indiana pressed brick, trimmed with stone, to be located at 153 Milton avenue; cost about \$6,000; Mr. Fr. Ritter, carpenter. Contracts include closets, felt roof, galvanized iron cornices, electric bells, wood mantels. For Mr. Murphy, a three-story and basement flat building, 21 by 52 feet, to be built of Anderson pressed brick, trimmed with artesian well and Colorado redstone, to be located at 156 La Salle avenue; cost \$8,000; contracts not let. Contracts include closets and bath, stained glass, skylights, slate and gravel roof, galvanized iron cornices, electric bells, wood mantels. For Mr. Karasek, a four-story and basement store and flats, 25 feet front by 85 feet deep, to be built of Anderson pressed brick, trimmed with terra-cotta and Lemont stone, to be located at corner of Dickson and Blackhawk streets; cost \$15,000; contracts not let. Contracts include closets, stained glass, skylights, felt roof, galvanized iron cornices, iron channels, electric bells. For Mr. Joseph Kreuser, a three-story and basement flats, 42 feet front by 42 feet deep, to be built of Anderson pressed brick, trimmed with artesian well and Colorado redstone, to be located on northwest corner of Rush and Pierson streets; cost \$10,000; contracts not let. Contracts include closets and bath, stained glass, skylights, slate roof, galvanized iron cornices, hardwood finish, electric bells, marble mantels.

Architect E. Baumann has prepared plans for Mr. F. Wandrey, for two-story stores and flats, 48 by 78 feet, to be built of pressed brick, trimmed with stone, to be located 415-17 Webster avenue; cost \$18,000. Contracts include closets and bath, skylights, felt roof, galvanized iron cornices, electric bells, marble mantels, dumb waiters.

Architect J. L. Silsbee has prepared plans for Mr. John F. Temple, for two two-story dwellings, 48 by 68 feet, to be built of Indiana pressed brick, trimmed with Carbondale brownstone, to be located 2941-43 Calumet avenue; cost \$12,000; Fammier & Daegling, masons. For Mr. F. W. Rueckheim, for a two-story dwelling, 25 by 55 feet, to be built of Indiana pressed brick, trimmed with Carbondale brownstone, to be located corner Vincennes avenue and Forty-second street; cost \$7,000; S. J. Moss & Co., masons; H. W. Waterman, carpenter. Also plans for Mr. Cochrane for a two-story building for stores and hall above, 45 feet front by 70 feet deep, to be built of brick and frame trimmed with stone, at Edgerton, Ills; contracts not let.

Architect Henry Hildenger reports: For Martin Eilers, three-story flat building, 22 by 68 feet; cost \$6,500; under way; W. Dennett, builder. For Peter Reichstetter, three-story and basement flat building, 22 by 62 feet; cost \$6,800; under way; F. Koepke, builder. For Joseph Moresch, three-story and basement store building, 25 by 66 feet; cost \$7,500; under way; Kralowick Bros., builders. For F. Dobker, one-story and basement store building, 25 by 64 feet; cost \$5,000. For Mr. Bernat, three-story and basement flat building, 21 by 68 feet; cost \$5,400; under way; Hoppe & Demuth, builders. For Mr. Bartels, two-story and basement flat building, 25 by 54 feet; cost \$6,000; under way; Hoppe & Demuth, builders. For Frank Schubert, three-story and basement store and flats, 24 by 124 feet; cost \$16,000; under way; Hoppe & Demuth, builders. For Mr. Koltenbach, brick cottage; cost \$2,100; under way; Ructuer Bros., builders. For P. Weinheimer, three-story flat building, 22 by 54 feet; cost \$5,000; under way; Hoppe & Demuth, builders. For P. Timrot, three-story store and flats, 24 by 100 feet; cost \$10,000; projected. For F. Major, three two-story dwellings, 31 by 33 feet; cost \$10,000; projected.

Architect L. G. Quackenbush has prepared plans for Mr. Henry Botsford for a two-story dwelling, 30 by 70 feet, to be built of St. Louis pressed brick, trimmed with brownstone, to be located at 2837 Michigan avenue; cost \$25,000; mason, Mr. John Griffith; carpenter, C. J. L. Meyers & Sons Co.; building under way; contracts include closets and bath, stable, copper cornices; electric bells and speaking tubes, stained glass, slate roof, iron beams, wood mantels, hardwood finish and tiling, steam heat. For Dr. R. L. Rea, for a three-story residence, 28 by 60 feet, to be built of Milwaukee pressed brick, trimmed with blue Bedford stone, to be located at 272 E. Huron street; cost about \$20,000; contracts not let; contracts to include closets and bath, stable copper cornices, electric bells and speaking tubes, stained glass, slate roof, iron channels, beams, etc., wood mantels, dumb waiters, hardwood finish and tiling, skylights, hot air heat.

Architects Fromman & Jelson have prepared plans for Mr. Kemper Bros., for four-story stores and flats, 50 by 100 feet, to be built of Anderson pressed brick, trimmed with Portage stone, to be located at 663-665 N. Halsted street; cost \$25,000; mason, Mr. Pauli & Becker; carpenter, Mr. John Raincke; building under way; contracts include closets and bath, stable, galvanized iron cornices, electric bells and speaking tubes, stained glass, felt roof, iron channels, beams, etc., marble mantels, passenger and freight elevators, gas for power, skylights.

Architect Wm. N. Arend has prepared plans for Lutheran Church Society for a church, 54 by 90 feet, to be built of brick, trimmed with stone, to be located at Nineteenth and Johnson streets; cost \$16,000; mason, Wm. Walk; carpenter, Mr. Frederick Koeppe; custome furnished by T. C. Diener; building under way; contracts to include galvanized iron cornices, stained glass, slate roof. For Mr. Rudolph Zielke, for a three-story front addition, 24 by 42 feet, to be built of Anderson pressed brick, trimmed with Lemont stone, to be located at 1007 Milwaukee avenue; cost \$6,000; mason, Mr. Julius Pieschke; carpenter, Mr. Peter Ott; building under way; contracts to include closets, galvanized iron cornices, felt roof, iron beams, skylights.

Cincinnati, Ohio.—Reported by Mr. L. Mendenhall: The labor matters are about adjusted, and business is going on, upon the same basis as before the eight hour movement was agitated, and confidence is fast being restored. Stone cutters receive nine hours' pay for nine hours' work on buildings and eight hours in shop. Carpenters ten hours' pay for ten hours' work; Bricklayers nine hours' pay for nine hours' work; Union Plasterers, nine hours' pay and work, while the non-union are paying for ten hours' work.

"What is one man's loss is another man's gain," was forcibly and sorrowfully demonstrated when A. H. Andrews & Co. carried off the court house furniture contract. The Robt. Mitchell Furniture Co. and other local firms could not bid, owing to a failure to adjust wages, etc., and thus a good job was allowed "to go by default," to a worthy Chicago house. Cincinnati is fairly going to outdo herself in the alteration of our truly beautiful city buildings, the contract running as high as \$1,270,000. One of the crying needs of Cincinnati is a city hall which will meet all exigencies, and be an architectural ornament to our city.

The granite pavement is being laid slowly but surely, and its different stages of advancement are watched closely by thousands. One can recall very appropriately one line of Grey's elegy, viz: "The ploughman homeward plods his weary way," for after the boulders are carted away, the plow comes into play and does its work well. Price of land has slightly increased here since 1783, particularly along Fourth street, from 66 2/3 cents per acre to as high as \$3,000 per front foot, making rich its possessors.

Architect Wm. Martin Aiken, reports prospects good, with the following plans now on his boards: Alterations for University Club, Fourth street and Broadway, of the interior; cost about \$5,000. Residence for Mortimer Mathews, Esq., at Glendale, frame, with redwood shingles, slate roof and containing 10 rooms. For A. D. Bullock, Esq., on Walnut Hills, a residence built as follows: First story brick, second story plastered with slate roof. House contains eleven rooms.

Architects Plympton & Trowbridge report prospects fair, with several sketches in progress, besides the following: A residence for Geo. Thompson, Esq., Glendale, Ohio, built of half timber and shingle, two stories high with slate roof, and containing ten rooms; cost \$4,000. Frame residence for Mrs. Graff, shingle roof, containing six rooms; cost \$2,000.

Architects O. C. Smith & W. R. Forbush, report the following: For C. O. Tauge-man, Esq., Fern Bank, Ohio, a frame house, nine rooms, weatherboarded and shingle, with shingle roof. For R. L. Puncheon, Esq., a frame house of eleven rooms with bathroom, slate roof. For Capt. W. W. Peabody, Madisonville, Ohio, a fine brick residence, slate roof, hardwood finish, containing fourteen rooms. Addition to Burr Oaks school house, North Bend, Ohio. For Nathan Drucker, Esq., a frame house of eight rooms, fine finish, and slate roof. For F. Phillips, Esq., a frame tenement house of eighteen rooms. For E. D. Bevirt, for a frame residence, two and one-half stories high, shingle roof, containing six rooms. For the Anderson estate, a block of four houses, brick, two stories high, tin roof, and containing six rooms, each.

Architects Des Jardins & Hayward, report: School house at Bellevue, Ky., built of brick, slate roof, and containing nine rooms; cost \$12,000. For the Misses Wasschen, at Mt. Airy, Ohio, a frame dwelling house of eight rooms, slate roof and pine finish. For

Henry P. Morris, a dwelling house of ten rooms, brick with slate roof. F. C. Cloud, Esq., a double brick house of twenty rooms and slate roof. The brick is Zanesville stock, and the whole is trimmed with serpentine. S. Bemar, Esq., Rising Sun, Ind., a brick dwelling house of eight rooms, slate roof and pine finish.

Sam. Hannaford is busy with several sketches, among them that for "The Children's Hospital," a donation from Thos. and Jos. Emery, two of our prominent wealthy citizens.

Architects E. Anderson, Geo. W. Rapp, W. W. Franklin and H. E. Siter, all have their time well employed.

Wm. A. Lay, Fresco Decorator, N. W. corner Fourth and Race streets, Cincinnati, Ohio, has just finished up a number of his outside contracts, among which may be mentioned the new M. E. Church, Nicholasville, Ky.; the new M. E. Church at Winchester, Ky.; also the decorations on the Danville, Ky., Christian Church, besides a number of lesser lights, all of this work being in the heart of the rich blue grass region.

Clarinda, Iowa.—Architect N. A. Olson, reports: The present condition and outlook is better than has been for years; mechanics and laborers are all busy. The following work is under way: Three-story and basement hotel building, brick and stone building, 70 by 140 feet; cost \$25,000. Christian Church, one story and basement frame building, 38 by 60 feet; cost \$3,000; W. G. Riddoch, builder. For *The Herald* Printing Co., two-story business building, 24 by 80 feet; cost \$3,500. For W. J. Calhoun, two-story brick business building, 24 by 100 feet; cost \$4,000. For V. M. C. A., two-story brick building, 24 by 100 feet; cost \$4,000. For J. M. Crabill, two-story brick business building, 25 by 100 feet; cost \$4,500. For M. E. Church, two-story frame Parsonage, 38 by 50 feet; cost \$2,600. For Chas. Linderman, two-story frame residence, 45 by 60 feet; cost \$7,000; C. Lueder, builder. For H. E. Parslow, two-story frame residence, 36 by 40 feet; cost \$3,000; C. Lueder, builder. City Water Works; cost \$40,000.

The State Insane Asylum buildings, Court House, and U. P. Church building (Architects Foster & Libbe), which have been previously reported, are under way.

Cleveland, Ohio.—Architects Cudell & Richardson, report: Present condition and outlook fair. For M. J. Morgan & Co., four-story pressed brick and stone business block, 65 by 165 feet; cost \$30,000; under way. For Ralph Worthington, four-story pressed brick and stone business block, 45 by 99 feet; cost \$20,000; under way. For W. S. Tyler Wire Works Co., three-story brick and stone manufacturing building, 44 by 100 feet; cost \$12,000; under way. For Jewish Orphan Asylum Trustees, four-story brick and stone fireproof building, 204 by 135 feet; cost \$150,000. Plans now being made. For Geo. Johnson, three-story pressed brick and stone business block, 58 by 90 feet; cost \$14,000; under way.

Clinton, Mo.—Architect Harry Kemp reports prospects for some large buildings this fall. Very dull now.

Architects Jungenfeld & Co. of St. Louis, have made plans for Anheuser Busch Brewing Association, of St. Louis, for the erection of a beer depot and soda factory to be erected here. Buildings to be of brick and stone; estimated cost \$15,000. Bids are now being taken by Mr. Geo. Hornmeyer, their agent at this place.

Coldwater, Mich.—Architect M. H. Parker reports: A number of small dwellings being erected, also some good residences. Present outlook good. Have under way for John P. Stuart, alteration of frame dwelling 30 by 50 feet; cost \$1,500.

Covington, Ky.—Architect E. H. Ashley reports: Business at present dull, but outlook is better for late summer and fall trade. For J. K. Dimmick, two and one-half story brick dwelling, 28 by 57 feet, stone trimmings, slate roof; cost \$6,500; under way; Craig & Loder, builders. For W. T. Eichelberger, two-story brick, 17-6 by 62 feet, tin roof, cost \$3,750; under way; M. R. Harris, builder. For E. J. Hickey, two-story double brick, 35 by 56 feet, tin roof; cost \$3,000; nearly completed. For M. Keating, double two-story brick, 34 by 60 feet, tin roof; cost \$4,200; V. B. Wood, builder. For W. R. Duianey, double two-story brick, 36 by 60 feet; cost \$4,330; under way. For Sweetman & Scott, two-story brick stable, 12,000 feet each story; lowest bid \$8,250.

Dabney, N. C.—Architect A. J. Kivett, of Henderson, reports: For E. G. Butler, two-story dwelling, 50 by 32 feet, slate roof; cost \$3,000; under way; A. J. Kivett, builder.

Dayton, Ohio.—Architects Peters & Burns report: Present outlook very quiet, particularly in local work. Much work postponed because of uncertainty of labor market. For Mrs. Dr. Treon, three-story iron, stone and brick business block, 40 by 50 feet; cost \$6,500; under way; John Ditzel, builder. For Fred Reibold, three-story, pressed brick, iron and stone business block, 99 by 138 feet; cost \$26,000; under way. D. F. Giddinger, builder. For Dr. J. S. Beck, two-story brick and stone dwelling, 46 by 75 feet; cost \$7,500; under way; let in detail. For P. A. Lafee, three-story iron and terra-cotta business block, 40 by 90 feet; cost \$15,000; under way; Jno. Ronzen & Co., builders. For David Pruden, two-story brick dwelling; cost \$3,500; under way. For Malleable Iron Co., foundry, 88 by 160 feet; cost \$12,000; projected. For John Meiler, two-story brick dwelling; cost \$3,500; under way. For S. C. Bennett, two-story dwelling, first story pressed brick, second shingle, 31 by 41 feet; cost \$4,800; under way. For City of Dayton, engine house, 60 by 60 feet; cost \$7,500; projected. For same, fireproof public library building, 84 by 120 feet; cost \$95,000; projected; separate contract. For Michael Shaatz, double brick dwelling; 35 by 60 feet; cost \$5,000; projected. For State of Ohio, at Xenia, industrial building, O. S. & S. O. Home; cost \$10,000. For U. S. A., postoffice building, National House, D. V. S.; cost \$35,000; under way. D. F. Giddinger, builder. For same, pumping-house; cost \$3,350; under way; J. W. Boren, builder. For Mrs. Ellis, double dwelling, 32 by 56 feet; cost \$4,200; under way; J. W. Boren, builder. For Adam Bretch, two-story brick dwelling; cost \$4,000; projected. For Woodland Cemetery Association, new entrance and office, 20 by 94 feet; cost \$7,000; projected. For E. W. Boving, warehouse, cost \$3,500; projected. For J. B. Finke, two-story brick dwelling; cost \$4,300; projected.

Detroit, Mich.—Architects Donaldson & Meier have had their design adopted for the Belle Isle Casino. It will be a frame structure, first story heavy timber and the second story balloon frame. It will be sheathed and sided outside and ceiled with molded ceiling inside, the uprights and rafters finished, exposed to view. It will be wainscoted with pine, hardwood base and cap. The whole interior will be finished natural, in oil. One very pleasant feature will be the wide verandas extending entirely around building, with here and there flights of broad steps leading up to same. The ground floor plan is composed of three main rooms, the general room, 30x70 feet, for a beer-drinking room for men. Numerous wide windows in this and the other rooms may be thrown open. This room will have a large English fireplace in one end; off from this a small room 15x16 feet, for solid refreshments. A ladies' room 18x25 feet and the most desirable in point of view to be obtained from it. There is also a gentlemen's smoking-room 30x18 feet, containing a refreshment counter. On the second floor a general room, 50x30 feet. The east half of building is divided into apartments for park commissioners and Casino-keeper. There are also bedrooms on third floor for family use. Floors will be connected by dumb waiters. There will also be several platforms running out over the sloping roofs of the verandas. The Casino will be located on the lower end of our beautiful island park. A magnificent view of the City, river and boating may be obtained. It will cost about \$10,000. Work will be commenced soon. They also report: For The Whitney Organ Co., three-story brick factory building, 150 by 150 feet; cost \$27,000; Scholl & Son, masons; H. George & Son, carpenters. For Dr. H. A. Clelland, four-story store building, 26 by 85 feet, brick, stone trimmings, gravel roof; cost \$15,000; Blay & Son, masons; Durst & Wood, carpenters. For Miss G. Coyle, block of three two-story dwellings, 60 by 80 feet, brick, stone trimmings; cost \$15,000; W. H. Traves, mason; Graff & Wallach, carpenters. For H. Barnard, two-story dwelling, 26 by 52 feet, brick, stone trimmings, gravel roof; cost \$5,000; H. Chandler, mason; Durst & Wood, carpenters. For N. D. Backus, two-story dwelling, 45 by 60 feet, brick, brownstone trimmings, slate roof; cost 10,000; Scholl & Son, builders.

Architect Gordon W. Lloyd reports: For E. H. Moreton, four-story brick warehouse, 50 by 80 feet; cost \$7,000; Thos. Fairbairn, builder. For Thos. Pitts, five-story store building, 40 by 105 feet, brick, stone trimmings; gravel roof; cost \$15,000; A. Chapoton, mason; W. G. Vinton & Co., carpenters; Batchelder & Sons, stone. For David Whitney, block of five five-story stores and offices, 124 by 165 feet, brick, stone trimmings on side, gravel roof, cast-iron front, in the spirit of the Renaissance style; corner store is to have tile floor and hardwood finish; A. Chapoton, mason; H. George & Son, carpenters; J. P. Walton & Co. (Cincinnati, O.) iron; Hutton Bros. galvanized iron; building is to cost \$85,000.

Architect Mortimer L. Smith reports: For H. Knowles, two-story brick dwelling, 29 by 66 feet, brick, stone trimmings, slate roof; cost \$6,000; John Finn, builder.

Architect A. B. Crane, reports: For A. B. Crane, two-story dwelling, 30 by 46 feet, brick, stone trimmings, slate roof; cost \$7,000; W. G. Vinton & Co., contractors.

Architect Jos. E. Mills reports: For Hon. Wm. C. Mayburn, two-story dwelling, 25 by 61 feet, brick, stone trimmings, gravel roof; cost \$3,000; J. B. Morris, contractor.

Architect Bradford L. Gilbert, of New York City, has prepared plans for F. T. Sibley, for a three-story residence, 45 by 60 feet, brick, stone and slate trimmings; cost \$10,000; contracts include, closets and bath, slate roof, steam heat, galvanized iron cornice, hardwood finish and tiling, brick mantels, pneumatic bells, speaking tubes, dumb waiters, conservatory, etc.; contracts not let yet.

Architects Scott & Co. report; For Board of Fire Commissioners, two two-story engine houses, each 50 by 85 feet, brick, stone trimmings, slate roof; cost \$12,000 each; Blay & Son, contractors.

Architects Hess & Raseman report; For Board of Education, two-story brick school house, 40 by 70 feet, brick, stone trimmings; cost \$14,000; Patrick Dee, mason; R. Helson, carpenter. For same, two-story school house, 63 by 40 feet, brick, stone trimmings, slate roof; cost \$11,000; H. Carew, mason; Lloyd, Flewelling & Co., carpenters.

Architect Walter McFarland reports; For W. Warne Wilson, two-story dwelling, 32 by 45 feet, brick, stone trimmings, slate roof; cost \$3,300; A. Beaton & Co., builders.

Architect W. E. Brown reports; For Fred Moran and Mrs. H. Barnard, block of nine three-story, stores, 180 by 90 feet, brick, stone trimmings, gravel roof; cost \$50,000; Ferdinand Scheibner, builder.

Architect R. T. Brooks reports; For J. W. Frisbee, two two-story dwellings, 28 by 56 feet, brick, stone trimmings, slate roof; cost \$12,000; F. Julien & Co., builders.

Architect Peter Dederich reports; For Dr. Jos. Schlette, two story store and dwelling, 43 by 68 feet, brick, stone trimmings, gravel roof; cost \$8,000; Andrews & Noll, builders. For Herman Sukert, three-story store and dwelling, 20 by 50 feet, brick, stone trimmings, gravel roof; cost \$4,000; August Dorsch, builder.

Architect E. W. Arnold reports; For S. K. Taft, block of three two-story stores and dwellings, 68 by 64 feet, brick, stone trimmings, gravel roof; cost \$10,000; S. J. Brodt, carpenter; Chas. Goodnow, mason.

Architect W. G. Malcomson reports; For Capt. McLochlan, two-story frame dwelling, 26 by 60 feet; cost \$3,200; Thos. Pumeey, builder.

L. P. Pelrequin is building for himself a block of four two-story frame dwellings, each 26 by 52 feet; cost \$7,800.

W. H. Morse is building for himself a block of two-story brick stores and dwellings, 42 by 68 feet; cost \$4,000.

Geo. E. Depew is building for himself, seven brick and frame dwellings, each 28 by 64 feet; cost of the whole, \$10,000.

Messrs. Eberts Bros. are building a two-story factory building, 86 by 50 feet; cost \$5,000.

Amount of permits issued in May; new buildings to cost \$431,460; alterations, etc. cost \$37,049; total \$468,509.

Doylestown, Ohio.—Architects Weary & Kramer, of Akron, report: Plans made for a stone receiving vault; cost not estimated.

Dundee, Ill.—Architect Wm. N. Arend, of Chicago, has prepared plans for Lutheran Church Society, for church building, 60 by 120 feet, to be built of brick, trimmed with stone; cost \$30,000; Mr. Markhoff, mason; Seiger & Brammer, carpenters; building under way; contracts to include galvanized iron cornices, stained glass, slate roof.

Edgewater, Ill.—Architect J. L. Silsbee, of Chicago, has prepared plans for Mr. J. L. Cochran, for ten two-story houses, to be built of pressed brick, trimmed with stone; cost \$60,000; contracts not let.

El Paso, Texas.—Architects Stewart & Carpenter report: Outlook good for the season. For B. Levy, two-story brick dwelling, 23 by 50 feet; cost \$3,500; under way. For J. F. Satterthwaite two-story double brick building, 50 by 60 feet; cost \$4,500; taking figures. For C. Long, three-story store and hotel building, 47-6 by 120 feet; cost \$20,000; drawings under way. For Dr. Carter, three-story store and office building, 35 by 86 feet; cost \$10,000; drawings under way.

Greenville, Pa.—Architect S. W. Foulke, of New Castle, reports: One-story frame church building, seating capacity 850; cost \$6,000; preparing plans.

Grove City, Pa.—Architect S. W. Foulke, of New Castle, reports: For E. T. Beatty, two-story frame dwelling; cost \$4,000; projected.

Henderson, N. C.—Architect A. J. Kivett reports: For A. J. Kivett, two-story and mansard slate roof dwelling, 32 by 42 feet; cost \$3,000; nearly completed. For Jno. B. Watkins, two-story and mansard brick dwelling, 48 by 48 feet, slate roof; cost \$3,000; nearly completed. For T. D. Homer, two-story residence, 17 by 42 feet, slate roof; cost \$2,000; under way. For N. Lehman, three-story pressed brick, iron front store building 24 by 80 feet; cost \$2,500; under contract; W. R. Kirch, builder. For Walter R. Henry, two-story dwelling, 32 by 50 feet; cost \$3,000; not let. For J. D. Cooper, two three-story tobacco buildings, 50 by 120 feet; cost \$3,000; Frank Wood, builder. For R. L. Dangerfield, two-story frame dwelling; cost \$2,000; under way. For A. J. Kivett, two-story dwelling, slate roof; cost \$2,000. For Captain J. R. Thrower, two-story dwelling, slate roof; cost \$2,500; just commenced.

Hiram, Ohio.—Architect S. W. Foulke, of New Castle, Pa., reports: For Hiram College, repairs, steam heating, slate roof, etc.; cost \$19,500; under way; J. G. Weaver, builder.

Iowa Falls, Iowa.—Architects Josselyn & Taylor, of Cedar Rapids, report: Brick and stone school house; cost \$10,000; plans just completed.

Jackson, Miss.—Architect James Swan reports: Present condition and outlook first-class; there is an unusual amount of building going on; brick buildings are fast filling up the district burned last spring; there are also a number of dwellings of a good class being built, averaging about \$3,000 each. For W. S. Hamilton, two-story brick building, 60 by 100 feet, iron front; cost \$4,600; under way; H. M. Taylor, builder. For Kells & Helen, two-story brick building, 26 by 85 feet; cost \$3,225; under way; Hull & Graves, builders. For Mrs. Zander, one-story brick building, 26 by 80 feet; cost \$1,600; H. M. Taylor, builder. For Mr. Helen, two-story brick building; cost \$3,150; Hull & Graves, builders. For R. W. Millsaps, frame dwelling, 25 by 80 feet; cost \$8,700; under way; Hull & Graves, builders. For R. M. Dameron, frame dwelling; cost \$4,175; under way; James Swan, superintendent. For L. Frejacio, two-story brick store building, 40 by 95 feet; cost \$6,800; under way; H. M. Taylor, builder. For Wm. Henry, frame residence; cost \$3,700; under way; James Swan, superintendent. For Wm. L. Nugent, frame residence; cost \$7,565; under way; James Swan, superintendent.

Jackson, Mich.—Architect Bradford L. Gilbert, of New York, has prepared plans for Mr. A. B. Robinson, for a two-story residence, 32 by 60 feet, to be built of stone, trimmed with stone; building to be commenced soon.

Architect B. L. Gilbert, of New York City, has prepared plans for Mrs. E. A. Webster, for a three-story dwelling, 76 by 52 feet, to be built of Zanesville, Ohio, pressed brick and wood, trimmed with Ionia stone; cost \$25,000; Bush & Patterson, general contractors; Mr. Lewis Sargent, carpenter; building underway; contracts include, closets and bath, stable, electric bells and speaking tubes, wood mantels, dumb waiters, stained glass, hardwood finish and tiling, hot air heat, soapstone laundry tubs and sinks.

Joliet, Ill.—Architect H. Boehme reports: For St. Mary's Parish, Rev. Father Burke, stone school house; cost \$10,000; Werner & Miller, builders. For P. V. Scully, frame dwelling; cost \$2,500. For Miss E. Rudd, frame dwelling; cost \$2,000; S. B. Pease, builder. For Rev. Father Hogan, frame residence; cost \$5,000; projected.

Kansas City, Mo.—Architect F. B. Hamilton reports: For Ariel Meinrath, five-story brick warehouse, 48 by 78 feet; cost \$16,000; foundations being put in. For J. G. Conkey, two-story brick dwelling, 40 by 52 feet; cost \$6,000; plans under way.

Lake View, Ill.—Architect J. L. Silsbee, of Chicago, has prepared plans for Mr. H. A. Knott, of Chicago, for two two-story dwellings, 30 by 50 feet, to be built of wood and brick, trimmed with stone.

Lincoln, Ill.—Architect W. Hunter reports: Prospects for building are not encouraging; some work has been stopped on account of the labor agitation; many mechanics are without employment, and would be willing to work ten hours per day at even less pay than they got last year. Have plans for several small buildings, aggregating \$9,000 or \$10,000.

There is being laid about seven miles of water pipe, in the city; aside from this little is being done in the way of improvements.

Little Rock, Ark.—Architect Max Allopp has prepared plans for a two-story brick residence, 50 by 140 feet, to be erected on the corner of Fifth and Main streets, for Judge Vaughn, at a cost of \$8,000.

J. H. Barton, proposes to erect a block of stores and dwellings, on Markham street between Cross and Pulaski streets.

Architect Fred J. H. Rickon reports: Most of the public works that have been under construction are completed, and after the buildings now under way are completed, prospects are that it will be rather dull. For McCarthy & Joyce, one-story brick

warehouse, 100 by 100 feet; cost \$5,000; Chas. Fisher, builder. For G. F. Barnum & Co., brick warehouse; cost \$6,000; Chas. Fisher, builder. Capitol Hill school house, two-story brick, 40 by 64 feet, slate roof; cost \$6,800; Wm. Millard, builder. For F. T. Vaughn, three-story brick store, 50 by 140 feet, tin roof; cost \$11,000; Jas. Phillips, builder.

Lockport, Ill.—Architect H. Boehme, of Joliet, reports: For Peter Weian-shaw, frame dwelling; cost \$2,500; F. Dieming, builder.

Louisville, Ky.—Architects McDonald Bros. report: Building generally seems dull, but with some prospect of improvement. For Baptist Theological Seminary, Dormitory, 60 by 250 feet; cost \$60,000; contract not let. Contract for Washington County (Ind.) Court house, 90 by 120 feet; cost \$63,000; let June 26. Contract for Insane Asylum buildings, 900 by 80 feet; cost \$275,000; to be let July 6.

Architect Mason Maury reports: For Thomas Shreve, store and office building, 33 by 70 feet; pressed brick and Longmeadow stone; cost \$11,000. Making drawings for J. D. Reed, two brick and stone dwellings, 24 by 56 feet; cost \$4,000, each; under way. For Samuel Castleman, two brick and stone dwellings, 24 by 56 feet; cost \$4,000, each; under way. For Central Pass. R. R. Co., brick stable, 70 by 180 feet; cost \$13,000; under way. For Mrs. J. O'Riley, brick and stone dwelling, 30 by 57 feet; cost \$4,500; making drawings. For Mrs. Jas. B. Clay, Sr., of Lexington, dwelling of rough stone and wood, 40 by 60 feet; cost \$6,000; making drawings.

Ludington, Mich.—Architect Jos. E. Mills, of Detroit, reports: For Board of School Trustees, two-story and basement school house, 82 by 46 feet, brick, stone trimmings, slate roof; cost \$10,000; Teidemann & Co., Ludington, contractors.

Lynchburg, Va.—Architects R. C. Burckholder & Son, report: We are not pressed with business, outlook is not encouraging. For Dr. W. O. Owens, residence, 40 by 60 feet; cost \$10,000; under way; W. B. Snead & Co., builders. For Stockton Terry, business block, 60 by 132 feet; cost \$30,000; under way; J. P. Pettyjohn & Co., builders. For Frank Matthews, tenement building, 30 by 45 feet; cost \$4,400; under way; W. B. Snead & Co., builders. For Karn & Hickson, factory building, 60 by 132 feet; cost \$15,000; under way; W. B. Snead & Co., builders. For J. M. Booker, tenement, 44 by 90 feet; cost \$8,000; projected. For John Suter, tenement, 40 by 36 feet; cost \$4,000; projected. For J. Lawson, tenement, 60 by 70 feet; cost \$10,000; projected.

Mansfield, Ohio.—Architect Levi T. Schofield, of Cleveland, has prepared plans for the Intermediate Penitentiary, to be built of black limestone, trimmed with Ohio sandstone; cost \$1,325,000; commenced July 1; Hancock & Dow, general contractors.

Middleton, O.—Architects Peters & Burns, of Dayton, report: For city of Middleton, eight-room brick school house, 75 by 90 feet; cost \$21,000; under way; separate contracts. For Chas. Lattner, two-story brick dwelling, 36 by 83 feet, also frame barn; cost \$13,000; under way; part contract, part day work.

Miles City, Mont.—Present condition and outlook excellent; cattlemen feeling jubilant over increased rain and better grass; great many investments, and buildings going on; work coming in constantly.

Architect Byron Vreeland reports: For Lt. R. P. Wainwright, U. S. A. one-story brick dwelling, 58 by 64 feet; cost \$15,000; plans under way. For Episcopal Church, brick and stone building, 52 by 64 feet, class rooms, tower, gallery, etc., shingle roof; cost \$6,000; contract not let.

Minneapolis, Minn.—Architect B. W. Fisk, reports: Building has been and is now very brisk, but mostly in dwellings. Fair prices are paid in all the trades. For H. F. Barton, two-story ten-room frame dwelling, 30 by 50 feet; cost \$4,500; under way. For W. E. McLain, two-story eight room frame dwelling, 28 by 40 feet; cost \$3,000; under way. For Frank Dart, two-story ten-room frame dwelling, 28 by 50 feet; cost \$3,800; under way. For J. H. Rowell, two-story eleven-room frame dwelling, 32 by 50 feet; cost \$5,200; under way; J. H. Rowell, builder. For A. G. Beethen, two-story seven-room frame dwelling, 28 by 40 feet; cost \$2,500; under way. For A. M. Coleman, two-story seven-room dwelling, 28 by 40 feet; cost \$2,500; E. C. Mayham, builder. For A. B. Latham, two-story eight-room frame dwelling, 30 by 40 feet; cost \$3,000; under way. For H. F. Barton, two-story eight-room double frame dwelling, 56 by 65 feet; cost \$8,000; under way. For Simpson M. E. church, brick veneer building, 70 by 108 feet; cost \$10,000; under way. For Silver Lake Congregation, brick veneer building, 50 by 65 feet; cost \$8,000; under way. For German M. E. church, brick veneer building, 63 by 73 feet; cost \$8,000; projected.

Architect W. H. Hayes reports: At present the outlook is good. A decided advance in calls for architectural services over last month. For First Congregational Church, church 96 by 140 feet, Main part one-story, chapel two-stories, with basement kitchen, dining rooms, closets, etc.; Lake Superior brownstone, blue slate roof, inside finish of red oak, steam heat, cost \$50,000; to be commenced at once and rushed to completion.

Ogallala, Neb.—Architect Jos. E. Mills, of Detroit, Mich., reports: For J. Hubbard, two-story frame dwelling; cost \$2,500.

Oxford, Mich.—Architect Jos. E. Mills, of Detroit reports: For Board of Union School Trustees, two-story and basement school building, 84 by 46 feet, brick, stone trimmings, slate roof, heated by steam; cost \$11,200; W. H. Myers & Son, of Hillsdale, Mich., contractors.

Paris, Ill.—Architect W. H. Floyd, of Terre Haute, Ind., has prepared plans for a frame residence, 42 by 56 feet, to be erected for Simon Hamburger, at a cost of \$6,000.

Pern, Ill.—Architect H. Boehme, of Joliet, reports: For C. R. I. & P. R. R. Depot; to cost \$2,500; projected.

Phoenix, Ari.—Architect J. M. Creighton reports: Very dull. For G. W. F. Johnston, small frame dwelling; cost \$1,500; under way.

Portsmouth, Iowa.—Architect A. Druiding, of Chicago, Ill., has prepared plans for Rev Jos. B. Hummert, for a church, with tower 124 feet high, 45 feet front by 100 feet deep, to be built of wood, trimmed with galvanized iron; cost \$9,000; contracts not let; contracts include galvanized iron cornices, stained glass.

Richmond, Va.—Architect B. J. Black reports: Labor agitation still retarding work; prospects, however, a little better than last month. For J. N. Cullingworth, three-story brick residence, 30 by 110 feet, brownstone trimmings, galvanized iron cornice, tin roof; cost \$12,000; commenced; Joseph Thomas, builder. For Isaac Davenport, Jr., one-story brick and stone tobacco warehouse, covering one and one-quarter acres, tin and glass roof; cost \$25,000; under way; F. Sitterding builder.

Sionx City, Iowa.—An architect who fails to give his name reports: For N. Desparois, three-story brick and iron warehouse, 50 by 130 feet, tin roof; cost \$30,000; under way; Payette & Babne, builders. For W. E. Hignman, three-story brick and iron wholesale building, 50 by 150 feet; cost \$40,000; under way; Johnson & Larsen, builders. For a stock company, opera house and chamber of commerce building, 72 by 200 feet; cost \$100,000; projected. For Independent School District, seven-room brick school building; cost \$20,000; projected. For J. Harrigan, office building, brick, 25 by 40 feet; cost \$3,000; under way; M. Nelson, builder. For E. W. Jordan, frame residence, 24 by 44 feet; cost \$2,500; under way. For C. C. Wales, brick store buildings, 44 by 80 feet; cost \$15,000; under way; John Beck, builder.

Architect G. G. Baldwin, reports: Business only fair. For Mrs. Mary Cary, two-story frame dwelling, 26 by 30 feet; cost \$2,000; under way; F. F. Beck, builder. For Mrs. Marion, two-story frame dwelling, 32 by 42 feet; cost \$2,400; under way.

South Evanston, Ill.—Architect L. G. Quackenboss, of Chicago, has prepared plans for M. E. Church at South Evanston; for a one-story church, 50 feet front by 90 feet deep, to be built of pressed brick, trimmed with terra-cotta; cost \$12,000; contracts not let; contracts to include stained glass, galvanized iron cornices, steam heat.

Tama City, Iowa.—Architects Josselyn & Taylor, of Cedar Rapids, report: Plans prepared for brick and stone addition to school house; cost \$5,000.

Terre Haute, Ind.—Architect W. H. Floyd, reports: Outlook improving; but aggregate will not compare with last year. Have plans on the boards for frame residence, 36 by 48 feet; cost \$3,000; to be erected for Ellis Niccoler. For C. Fairbanks, pressed brick stable, 42 by 59 feet; cost \$4,000; roof on.

Tiffin, O.—Architect F. K. Hewitt, reports: For D. J. Stalter, two-story brick residence, 33 by 49 feet, cutstone and terra-cotta trimmings, grates and mantels, electric wires, pneumatic bells, fine plumbing, tile hearths and vestibule; cost \$5,600; contract let; J. P. Myers, builder. For M. Frost, five frame cottages; cost \$3,500; one frame cottage; cost \$1,300; D. M. Beaver, builder. For Dr. Willard, seven-room frame house; cost \$1,200; D. M. Beaver, builder. For F. K. Hewitt, brick residence, 31 by 47 feet, cutstone trimmings, grates and wood mantels, electric wires, pneumatic tubes, fine plumbing; cost \$3,800; J. P. Myers, builder.

Tipton, Iowa.—Architects Josselyn & Taylor, of Cedar Rapids, report: For Wm. Gilmore, frame dwelling; cost \$5,000; plans prepared.

Townsend, Mont.—Architect Byron Vreeland, of Miles City, reports: two-story brick school house 58 by 64 feet; cost \$15,000; nearly completed; E. H. Gordon, builder.

Troy, Ohio.—Architects Peters & Burns, of Dayton, report: For Wilson J. Peters, two-story frame and shingle country house; cost \$6,000; under way; day work. For Phil. J. Gates, two-story brick dwelling; cost \$5,200; under way; day work.

Union, S. C.—Architect Gust. E. Leo, of Atlanta, Ga., reports: For Mr. Flynn, new front to brick store; cost \$1,700. For Mrs. Hix, frame cottage, 46 by 60 feet; cost \$3,000; projected. For D. A. Townsend, two-story brick dwelling, 44 by 50 feet; cost \$3,500; Mr. Sharkey, contractor. Additional granite tower, 20 by 24 feet, to M. E. Church; cost \$4,000; projected. New slate roof, and trusses for Union County Court house; cost \$1,600; projected. For Mrs. Dawkins, remodeling frame residence; cost \$2,500; Mr. Sharkey, contractor.

Waco, Tex.—Architect W. W. Larmour reports: Have a great many plans on the boards, and have refused a number of buildings, unless clients can wait until fall. We shall lay in this city up to the present date, from January 1, '86, over 12,000,000

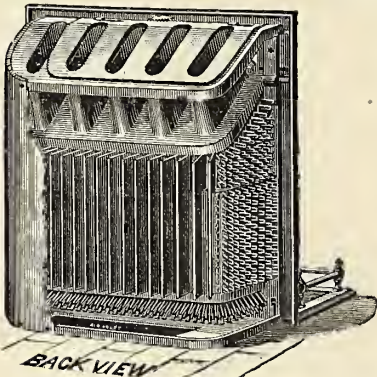
brick, and for the whole year not less than 20,000,000. There is a great demand for common bricklayers; they can work the year around. Present wages \$4.00 per day. Please correct report in June number. It reads: For Baylor University, three four-story buildings; cost \$45,000. It should read cost \$45,000 each, or a total of \$135,000. Plans are prepared for the following: Three-story brick store building, 50 by 150 feet, stucco front, galvanized iron cornice; cost \$17,000; ready for bids. For Dr. McDowell, one-story frame cottage, 41 by 60 feet; cost \$3,500; Moore & McKinney, builders. For J. D. Tarlton, one-story frame cottage, 36 by 71 feet; cost \$2,700. For J. E. Stone, two-story brick store, 80 by 100 feet; cost \$6,500; Jas. Harris, builder.

Wakefield, Neb.—Architect G. G. Baldwin, of Sioux City, Iowa, reports: For Philo Graves, two-story brick, 31 by 40 feet; cost \$3,000; projected.

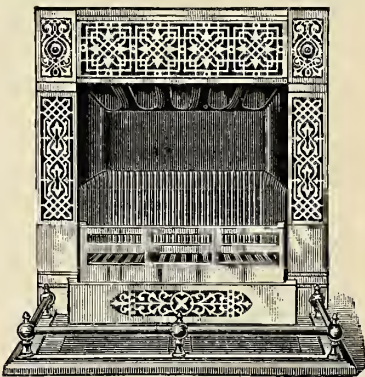
Wheaton, Ills.—Architect J. L. Silsbee, of Chicago, has prepared plans for Judge Drummond for a two-story dwelling, 50 by 35 feet, to be built of frame; contracts not let. Contracts include closets and bath, stained glass, hardwood finish, wood mantels.

White Sulphur Springs, Mont.—Architect Byron Vreeland, of Miles City, reports: Three-story brick school house, 58 by 60 feet, shingle roof, etc.; cost \$20,000; under way; contract not let.

PRICES OF LABOR.	Buffalo, N. Y.	Chicago, Ill.	Cincinnati, O.	Detroit, Mich.	Kansas City, Mo.	Marshalltown, Ia.	Memphis, Tenn.	Miles City, Mont.	Minneapolis, Minn.	Montgomery, Ala.	Omaha, Neb.	Pittsburgh, Pa.	Richmond, Ind.	Sioux City, Ia.	St. Louis, Mo.	Waco, Tex.	Wheeling, W. Va.	Wilmington, N. C.
Bricklayer	\$3 00	8 hrs. 3 20	\$4 50	3 50	\$4 00	\$3 50	\$4 50	\$5 00	\$3 50	\$3 00	\$4 50	\$4 00	\$4 00	\$3 50	\$4 50	\$4 00	\$4 00	\$2 25
Brickmason (Front)	3 00	8 hrs. 4 00	4 50	5 00	4 00	4 00	5 00	5 00	5 00	5 00	5 00	5 00	4 00	5 00	5 00	5 00	4 25	5 50
Carpenter	2 50	2 50@2 75	2 50	1 75@2 25	2 50	2 75	3 00	3 50	2 75	2 50	2 50@3 00	2 50	2 25	2 50	2 40	2 50	2 50	1 75
Cabinetmaker				1 75@2 25					3 00		3 00		2 50		2 50		2 25	
Finisher		3 00	3 00	1 00@1 75			3 00	4 00	3 00		3 00		2 75		2 75		2 25	
Gasfitter	3 50	2 50@3 00	3 25	2 00@3 00	3 00	3 50		8 00	5 00		3 00@4 00	3 00	3 00	3 50	3 50	2 25	2 50	2 75
Laborer	1 25	1 60@1 76	1 50	1 50	1 50	1 75	1 25	2 50	1 50	1 00	1 75@2 00	1 50	1 25	1 60	1 25	1 50	1 00	
Painter	2 00	2 25@2 50	2 50	1 50@2 50	2 50	2 50		2 50	2 50	2 50	2 50@3 00	3 00	2 00	2 75	2 50	2 25	2 50	1 75
Glazier	2 00			1 50@2 50	3 00	2 50			2 50		3 00	3 00	2 25		3 00	2 25	2 50	1 75
Plasterer	3 00	8 hrs. 3 50	3 50	3 25	3 00	3 00		4 00	4 00	2 25	4 00@4 50	2 66	3 00	3 00	4 50	4 00	2 50	1 75
Plumber	3 50	3 50@4 00	3 50	2 50@3 00	4 00	4 00		8 00	4 00		5 00	3 50	3 25		3 50	2 75	3 00	
Stonemason	3 00	4 00	3 50	3 25	3 00	3 75		4 50	3 50		4 50@5 00	3 00	2 75	3 00	4 00	3 50	2 75	
Carver	5 00	4 50@5 00	5 50	5 00					4 00		5 00		4 00		3 00			
Stonemason	3 50	3 75@4 00	3 50	3 50	2 75			9 00	4 00		5 00	3 50	3 00		4 00	4 00	3 00	
Stonesetter	3 00	4 00	4 00	3 50	3 50			5 00	4 00		4 00	4 00	5 00		4 00	4 00	2 75	
Roof (Tin)	2 75	2 75	2 75	1 25@2 25	2 75	3 00		3 00	2 50		2 50@3 00	2 50	2 25		2 50	2 50	2 25	2 00
Slat	3 00	3 00	3 25	1 75	2 50	2 75			3 50			3 00	2 50		3 50	3 50	2 50	2 00
Stairbuilder	3 00	2 25@3 75	2 75	2 75@3 00	3 00	4 00			2 50		5 00	2 50	3 00	3 00	3 00	3 00	3 00	2 50
Steamfitter	3 50	3 50	2 50	2 50@3 00	3 50	3 50		8 00	3 50		4 00@5 00	2 50	2 75		3 50	2 50	2 50	3 00



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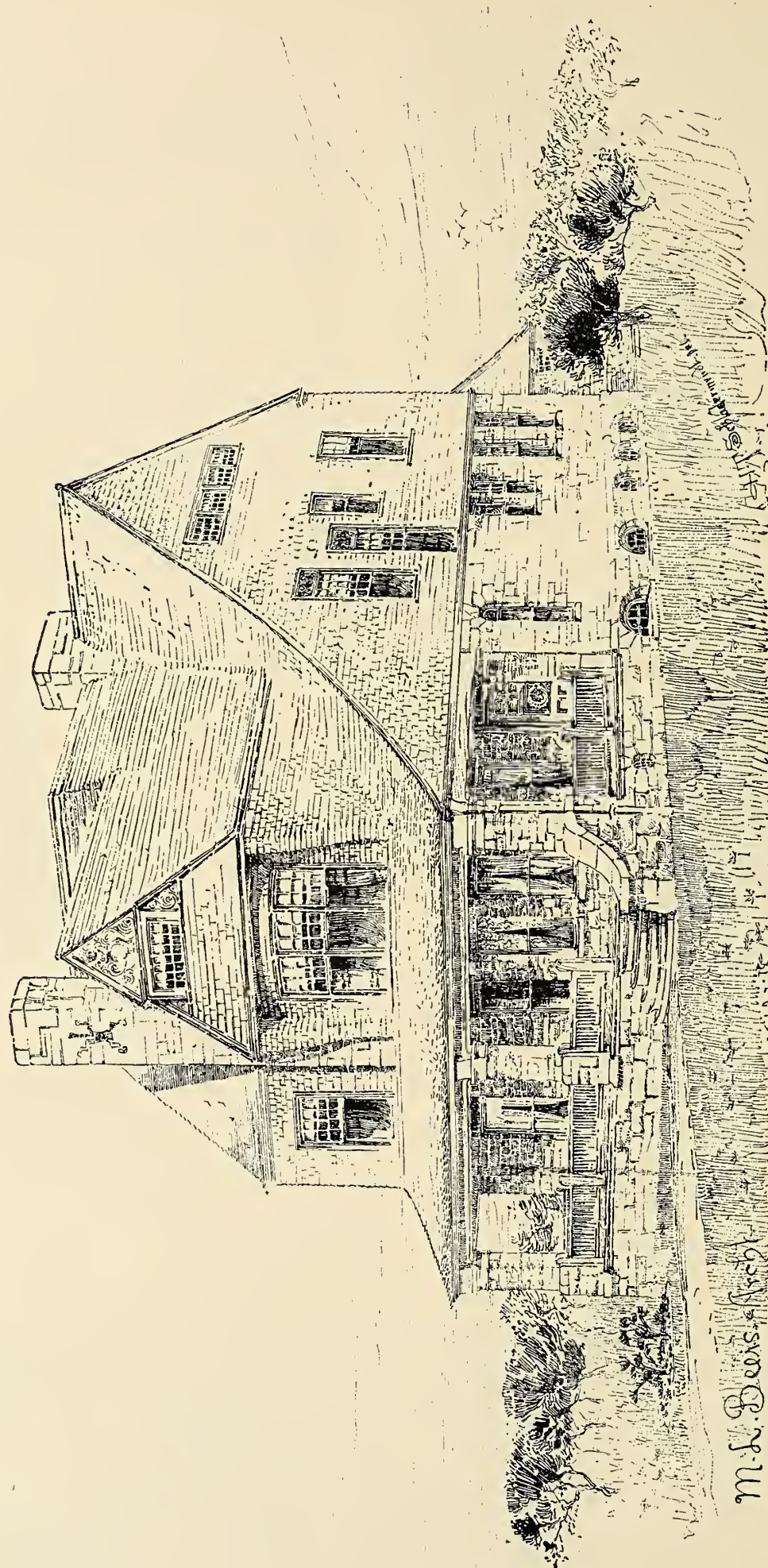
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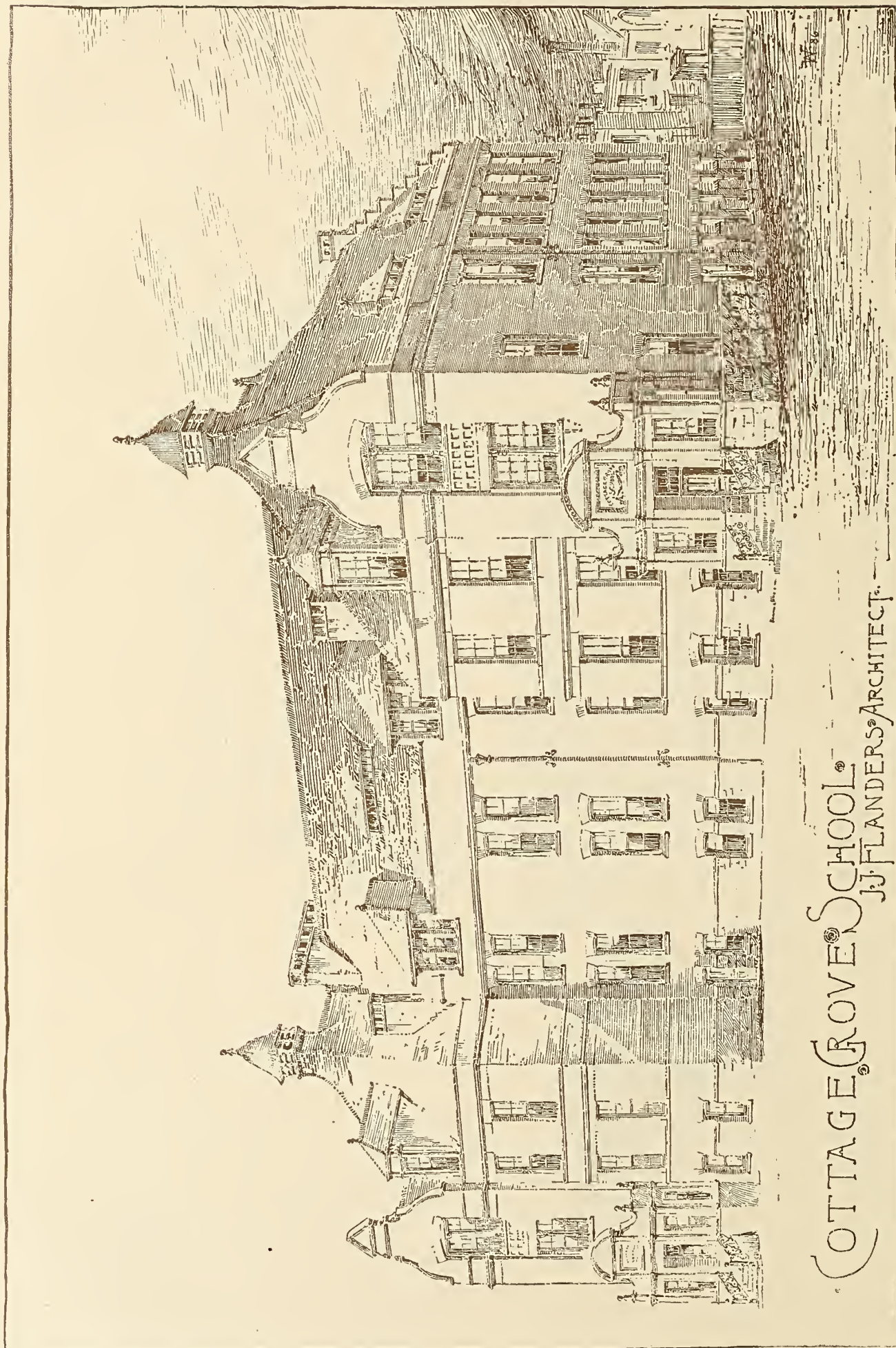
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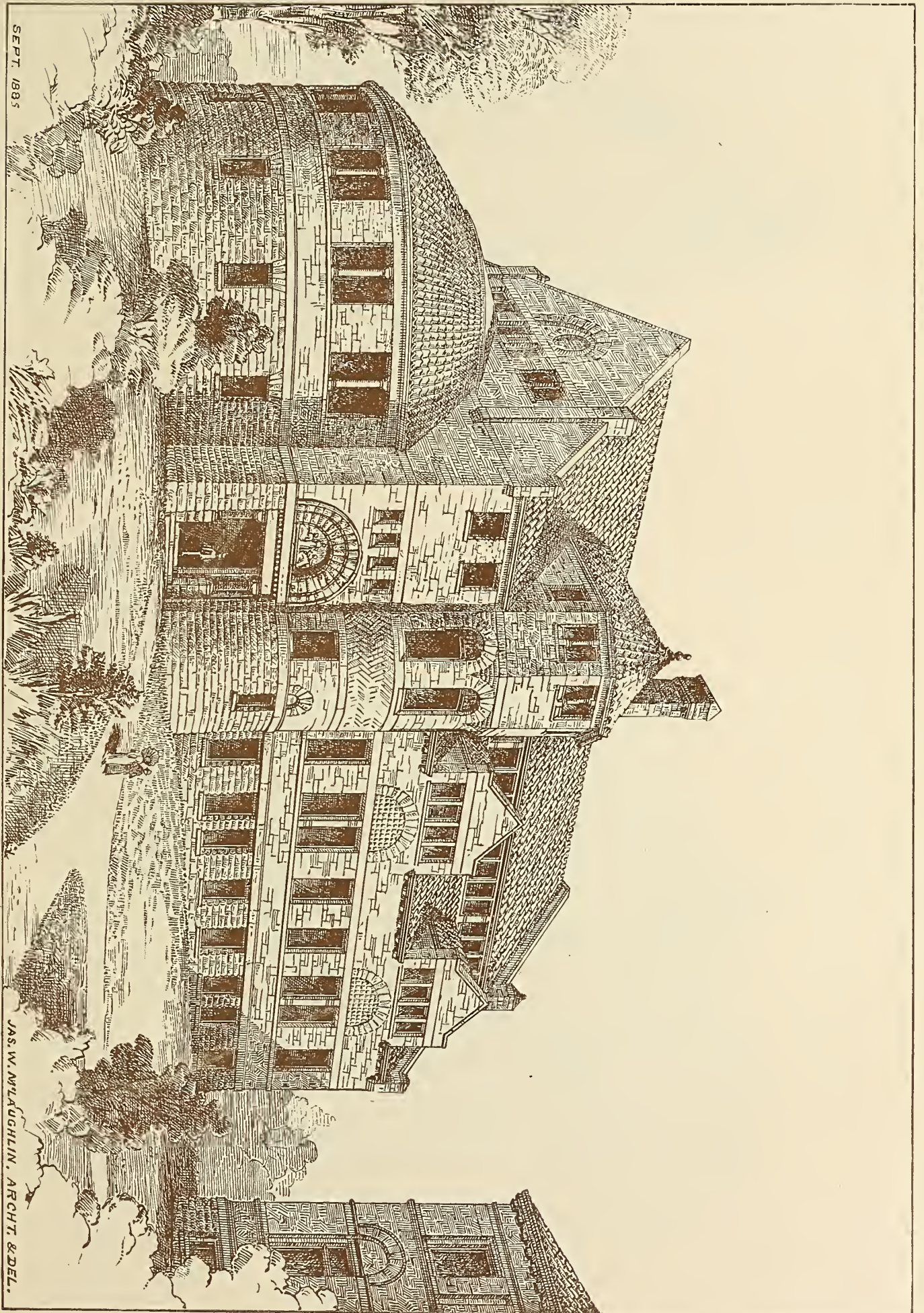


RESIDENCE FOR MRS. M. LOUISE WHITNEY, CHICAGO.

M. L. BEERS, Architect.



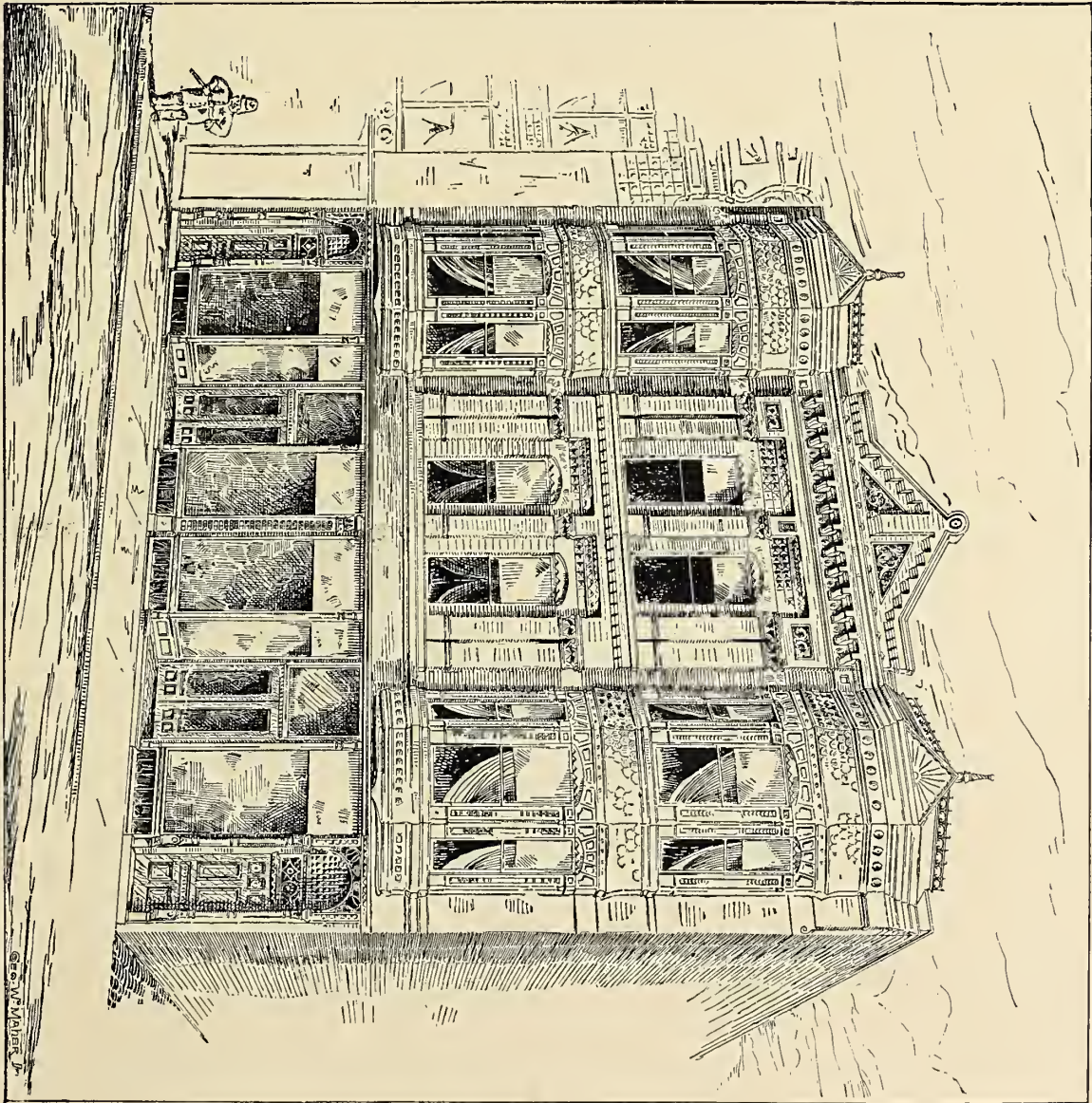
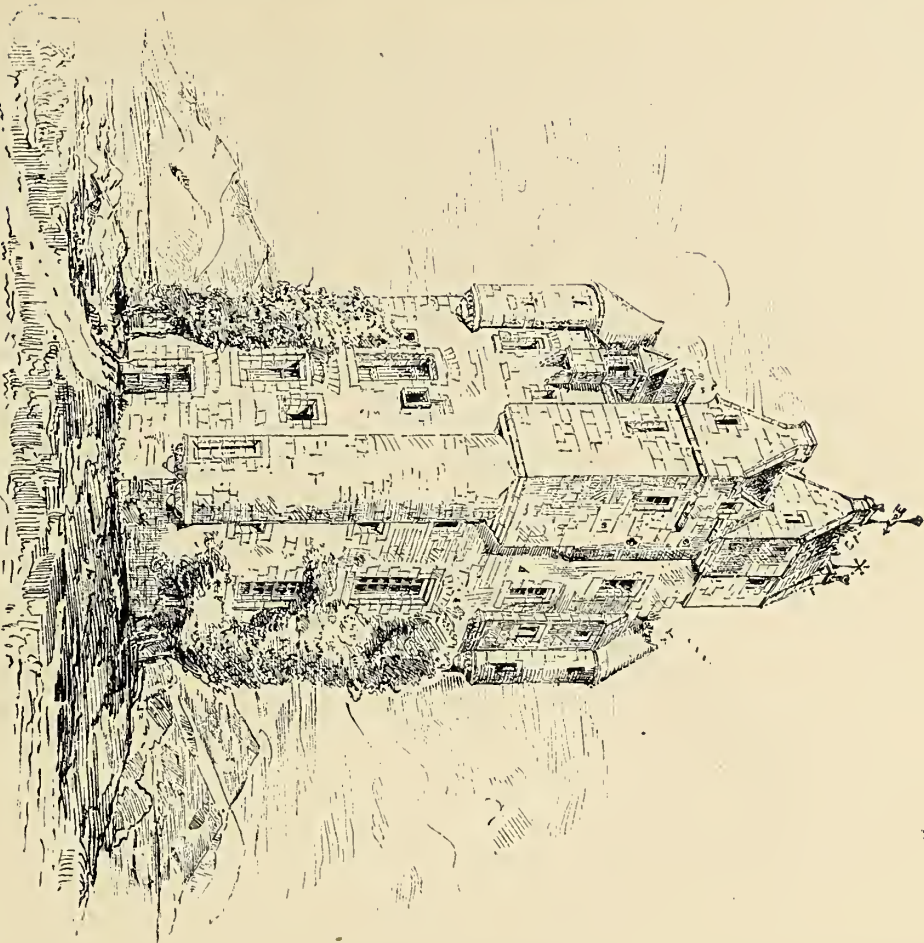
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CINCINNATI ART SCHOOL.

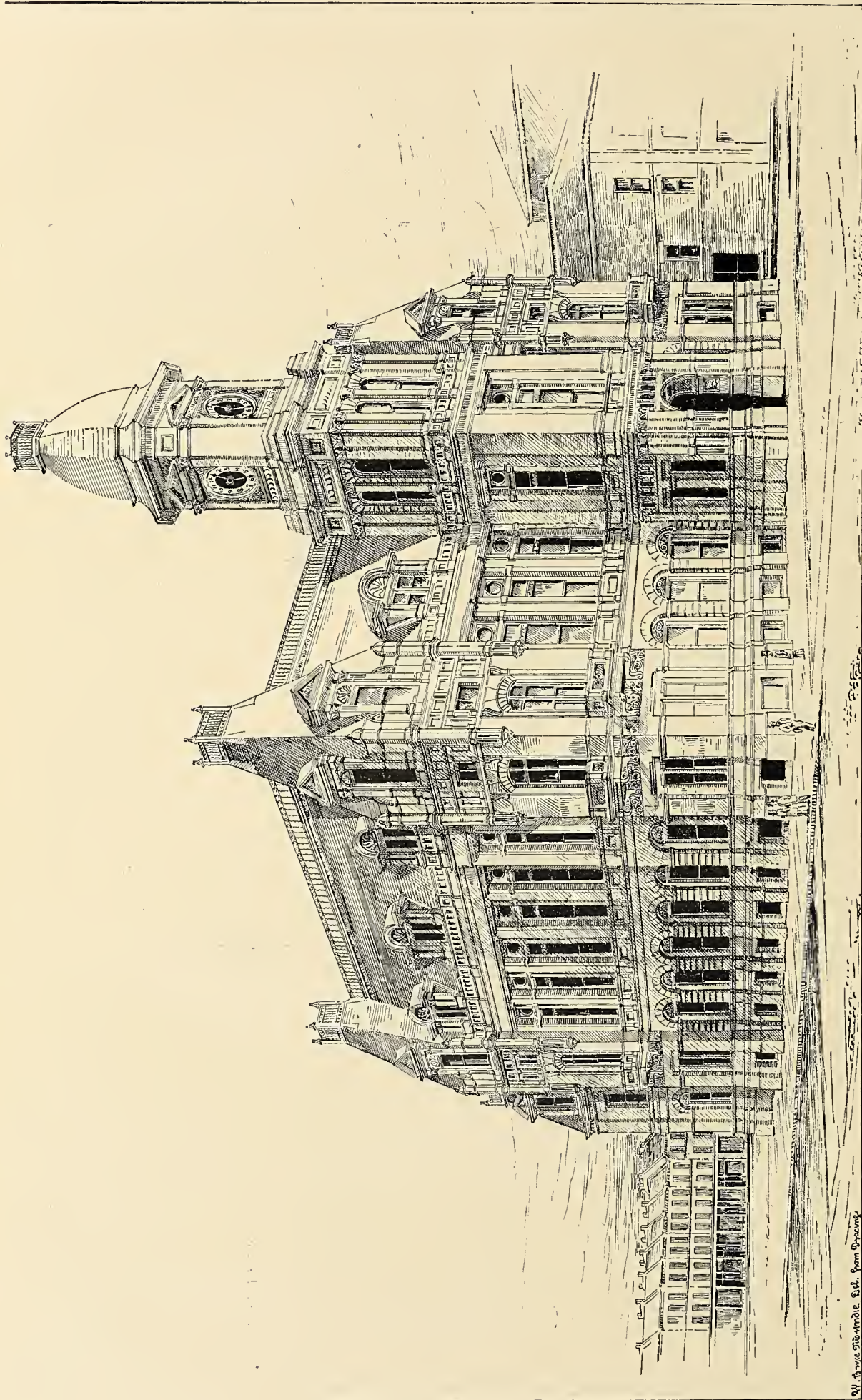
JAS. W. McLAUGHLIN, Architect, Cincinnati, Ohio.

Chicago Architectural Sketch Club:
Initiation Sketch by G. T. Johnson.
Amisfield Tower: Dumbie's share
© Colford.



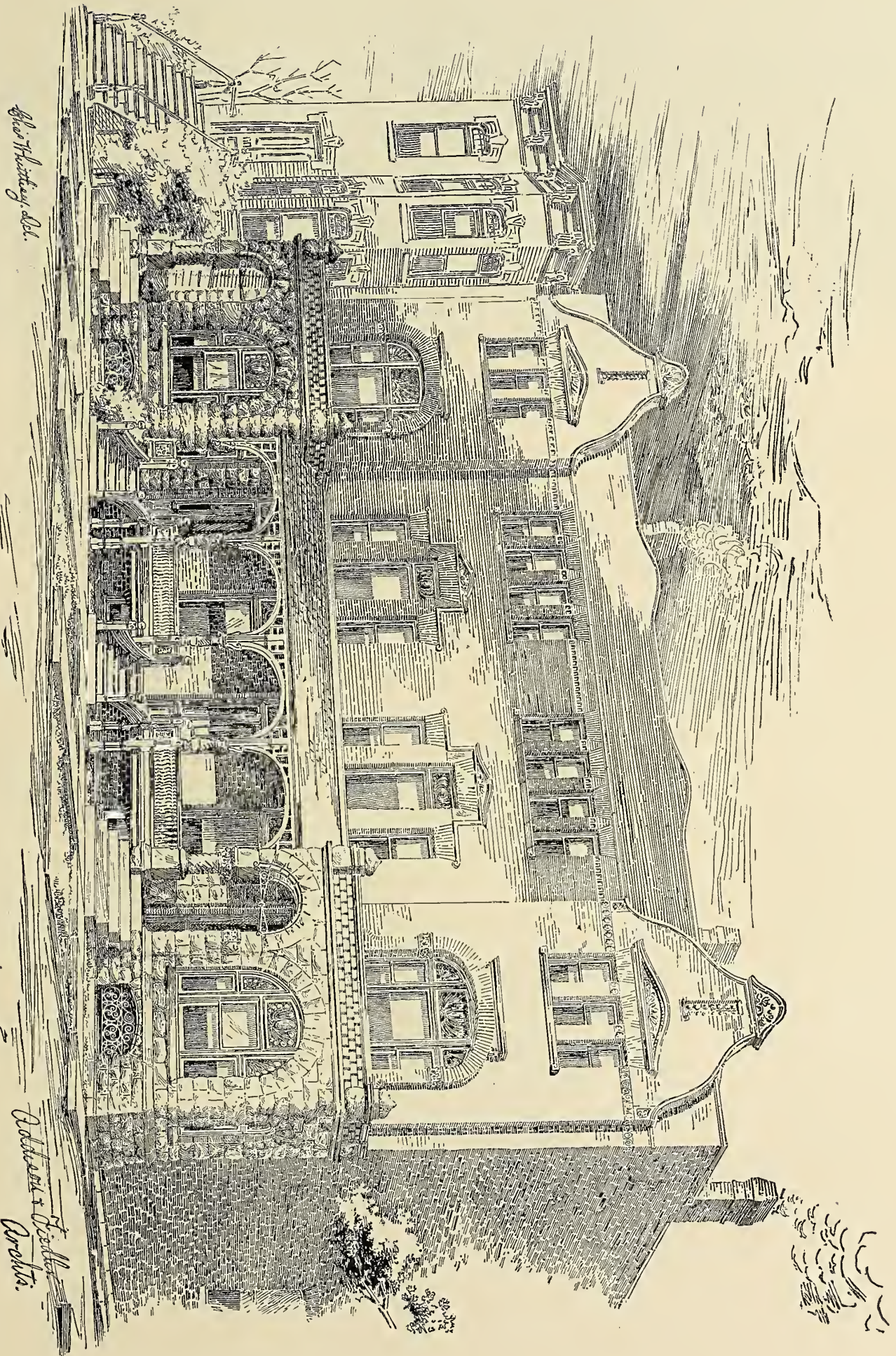
BUILDINGS FOR HENRY CORWITTH, CHICAGO.

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C. W. MULLIGAN, Architect.



HOUSES FOR THOMAS CUNNINGHAM, CHICAGO.

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A MONTHLY JOURNAL
(WITH AN INTERMEDIATE NEWS NUMBER)
DEVOTED TO WESTERN INTERESTS.

OFFICIAL ORGAN OF THE
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(A NATIONAL ORGANIZATION.)

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DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

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Semi-Annual Meeting of the Association of Ohio Architects.

THE Association of Ohio Architects held its semi-annual meeting at the Burnett House, Cincinnati, on July 15. For this exceedingly busy season the architects of the state at large presented an exceedingly large delegation in attendance. President Rapp in his address outlined the work of the year, past and present, in an agreeable and well chosen address. The competition code of the Western Association was read, discussed and adopted by the association, and each member will hereafter send a copy as his reply to all invitations to compete on the "no premium, any and all plans may be rejected," plan. The colossal assurance of the trades unions was shown in a request from a local union that the members of the association allow no contractor to figure upon plans who employed non-union workmen. The letter was read but immediately "laid under the table," as a matter with which architects have nothing to do, many of them doubtless figuring the personal loss in commissions these same trades unions have caused them during the past three months. This action should show trades unions throughout the country that until they are organized upon a business and lawful basis and managed by intelligent workmen, and not by ignorant demagogues, that intelligent men or bodies will give them little consideration or countenance. The next meeting of the A. O. A. will be held in Cincinnati, and the reception and entertainment accorded the visiting members by the Cincinnati architects during their last visit will not only make their attendance sure, but should serve to attract every member of the profession in the state to the meeting on the third Thursday of January next.



THE first semi-annual meeting of the Association of Ohio Architects was held at the Burnett House, Cincinnati, Ohio, on Thursday, July 15, 1886. The meeting was called to order by the president, Mr. Geo. W. Rapp, at 10 A.M. The president then addressed the association as follows:

Members of the Association of Ohio Architects:

On behalf of the Cincinnati Chapter of the Ohio Association, I extend to you a most hearty welcome to our city, with a wish that you may all enjoy yourselves during your sojourn with us, and that when you leave for your respective homes you shall be favorably impressed with our people and our city, with its beautiful suburbs, and last, but not least, our architecture. Our city is so peculiarly situated that most strangers, who only have occasion to visit the smoky hollow beneath our hills, carry off a very poor impression of the so-called Queen City of the West.

But when a visitor ascends our incline planes and the cable road to the hilltops beyond, and by way of contrast beholds our Eden Park, with the Art Museum looming up to the sky, our Zoological Gardens, the finest in the world, our East and West Walnut Hills, Avondale, Clifton, Burnet Woods Park, Mount Auburn and Price Hill, with their palatial residences, fine cottages, beautiful landscape gardening, and the magnificent views of the Ohio, with the ranges of hills beyond, he will then say that we may justly feel proud of our city, especially when we shall have completed our granite and

asphalt streets, and shall have rid ourselves by smoke consuming devices of the clouds of smoke that overhang the lower or business portion.

We are assembled here today at the first regular meeting since our organization at Columbus, on January 12. On that day, in spite of the bitter cold weather, when the thermometer was away below zero, quite a respectable number of architects ventured from their homes in different parts of the state, to join hands in fellowship and to form this association, which I hope in a short time will be second to none in the country, and will be exerting its beneficial influence in all directions, so that by friendly intercourse between its members, those who were wont to look upon their colleagues with feelings of distrust and suspicion shall henceforth grasp the right hand of fellowship and profit by a mutual interchange of ideas.

An association of this kind can aid materially in cultivating the taste of the people in the sublime art of architecture, by the artistic as well as practical productions of its members, which can only be done at the expense of considerable time and careful study; and the upholding of the legitimate and reasonable schedule of charges established by the American Institute of Architects and adopted by the Western Association of Architects and by all state associations, of which there are now eight, viz: those of Ohio, Illinois, Iowa, Missouri, Kansas, Minnesota, Texas and Nebraska. The formation of state associations has become a necessity, for only a state association can look after the local welfare of the profession; the proper modification of existing building laws and the proper revision of proposed new laws, and therefore does not conflict with the

Mr. McLean: I should explain that the committee that offered this report supposed it was not perfect, and every meeting, both of the Western Association and the state associations will probably change it in some particular as their experience dictates. It is simply a foundation; it is the best thing we know of yet, and the idea is to accept that. If you have a competition under it and find it is defective in any point, why, amend that. And that was all that was intended by this committee; they acknowledged in their report that it was probably defective. I think there were several points in the Kansas competition they found could be improved in the future.

The President: The question is on the adoption of this code.

Mr. Schuerman: One thing more. Suppose, for instance, the committee refuse to adopt this code, what are the architects to do as members of the Ohio Association—what action would the architects take then? Would they refuse to offer competition drawings? I ask this as an architect, because if there is going to be a scramble, and the members of the association won't stand out and insist on a compliance with the code, why of course I want to be in.

The President: My impression is that the entire matter is left to the honor of the members of this association. I think that will settle the question. You have all heard the motion. The motion was carried.

Mr. Schuerman: Mr. President; I make a motion that any architects receiving invitations for competitions will either notify the proper authority—whether it be our president or secretary—that such an invitation has been received and that such invitation will be referred to the secretary or president, with instructions to furnish a code to this building committee, or the proper party, and put it to them in as pleasant a light as possible, and try and get the code adopted by the building committee. That is the only way that I see that we can work together in unison.

Mr. McLean: Mr. President, it will be a better way, and is in accordance with that report, for each architect, as an individual member of this association, to have copies of the code in his possession, which the secretary of the association will provide, and when an invitation comes to him, inclose that code. In his answer to the committee, the president and secretary of the association, as individual architects, will probably receive that invitation too, and should respond in the same way as individuals. In that way you give it more force. If each member of the association, or, as it should be, every architect in the State of Ohio sends one of these printed codes to a competition committee it will have an immense force, while if a single individual—the president of an association—sends it, it will have very little more force than if he did it as an individual.

The President: My impression is that the best solution would be to have the executive committee authorized to print a number of copies of this code for the use of the members, on application.

Mr. McLean: I think, Mr. Root, the secretary of the Western Association will provide any number of them you might send for. The motion was read by the president and carried.

The President: It would be well to state here that I have been asked by representatives of some of the labor unions to bring the matter before this meeting, to not invite non-union bosses to bid on work in our offices. It is submitted to the association for action.

Mr. Schuerman: Mr. President, I don't think that is business that comes before this meeting at all. Let them act on their own differences. I will make a motion that that be laid on the table. Seconded. Carried.

Mr. Crapsey: I have a matter I would like to present:

WHEREAS, A competition for a public work was recently instituted in the city of Cincinnati, and whereas, the officers in charge of said competition issued through the public press an invitation to all architects to submit "bids" for the necessary plans, specifications, and

WHEREAS, The Cincinnati members of the Ohio Association of Architects, at a called meeting, signed unanimously a paper declining to bid on the work as asked for by the authorities, and

WHEREAS, After said paper was sent to the authorities, several of the members who had signed said paper declining to bid on said work, and who are members of this association, did send in to said authorities written proposals to do said work for a certain sum of money, in accordance with the first invitation therefor, therefore, be it

Resolved, That a committee of three be appointed by the chair to investigate this matter and report to the executive committee.

The resolution was seconded and carried.

The President: I will appoint as a committee on incorporation, Messrs. Yost, Weary, and Metzler, and as a committee to investigate the "late lamented" competition, Messrs. Crapsey, Aiken and Yost.

On motion of Mr. Forbush, the thanks of the association were passed to the proprietors of the Burnett House and to the press for courtesies received.

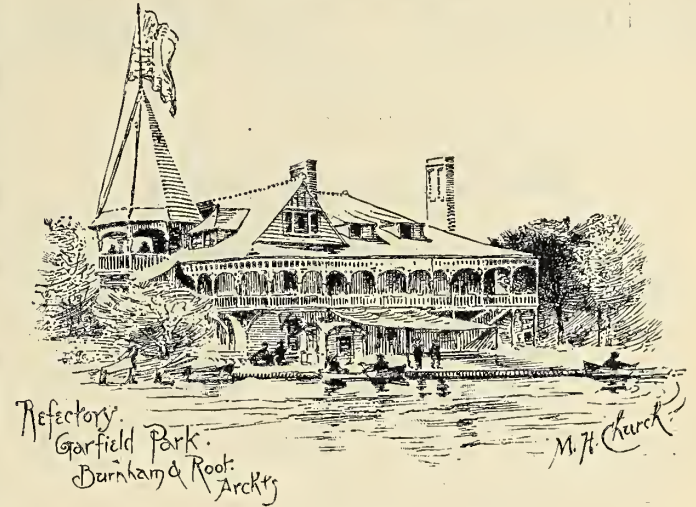
The president called attention to the desirability of forming city associations.

The meeting adjourned to meet at Cincinnati the third Thursday in January, 1887, unless ordered on another date by the Executive Committee.

After adjournment, about twenty of the Cincinnati architects and their visitors spent two days in visiting various points of interest. The party first visited a large brewery where alterations were being made by Mr. Rapp, and inspected the system of manufacturing ice and distributing cold brine by pipes throughout the structure.

A most interesting visit was made to the studio of Matt. Morgan, where that genial artist is painting a panorama of the battle of Atlanta. General Clark, who was an officer in that battle, and is giving Mr. Morgan able assistance in his work, explained the prominent points in the panorama. A visit to Burnet Woods, a magnificent natural park, was most delightful. The ground is hilly, and gigantic beach trees, in breadth and girth surpassed in few forests, shaded the ground completely. Here was enjoyed a band concert; and the noticeable absence of the beer-garden feature common to outdoor concerts, and the elite of the city in carriages, and on the benches and grass around, listening to the airs from "William Tell," under the beach trees, was a genuine treat to the visitors. The party returned through the picturesque suburbs of Avondale and Clifton, and suppered at the Highland House, and enjoyed more music by attending an opera given there. The next day the visitors were again taken in charge by the local

architects and the days spent in a drive, which included a visit to the courthouse, Art Museum, Eden Park, East and West Walnut Hills and Mount Auburn, and the afternoon at the Zoölogical Gardens. The Cincinnati architects certainly know how to entertain, and the visitors showed that they appreciated the entertainment.



Synopsis of Building News.

Birmingham, Ala.—Reported by Architects W. S. Smith & Co. We herewith send you a report of the improvements in the building line taken from the offices of the following architects, for the past five months:

County jail, stone, \$21,000; South Side school building, brick, \$10,000; Colored school building, wood, \$2,700; South Side market, brick, \$7,000. For Morris Brothers, two three-story flats, stores; pressed brick front; stone and galvanized iron trimmings, \$14,000. For B. F. Roden, two three-story flats; two faces of Zanesville brick, trimmed with stone and galvanized iron, \$17,500. For Moore, Moore & Hadly, one store, three-story flat; pressed brick front; stone and galvanized iron trimmings, \$10,500. For C. H. Francis, one store, two-story iron front flat, \$6,000. For Wilden & Campbell, two two-story brick flats, \$7,500. For Thompson & Rogers, two two-story brick flats, \$7,500; remodeling First National bank, \$3,000; Birmingham Street Railway stables, \$5,500; Col. Jackson, livery stable and store, \$7,000; Birmingham cotton compress, \$9,000; remodeling stores for Dr. Caldwell, \$3,000. Residences.—Harry Harsh, two-story frame, \$2,700; Wm. C. Wood, two-story frame, \$5,500; Wm. Berney, two-story frame, \$6,000; J. C. Kyle, two-story frame, \$3,500; E. T. Martin, two-story frame, \$2,000; Dreunen & Co., two one-story frame cottages, \$4,000; J. R. Rogers, two-story frame, \$3,500; Mrs. F. A. Steele, two-story frame, \$4,000; Wyndom Mason, frame cottage, \$2,200; B. C. Scott, \$2,500; Geo. L. Morris, two-story frame, \$3,500; D. I. Purser, two-story frame, \$3,200; F. C. Porteous, two brick houses, \$5,700; W. A. Chensworth, frame cottage, \$3,200; Dr. Geo. Morrow, two-story frame, \$2,800; H. W. Gorside three cottages, \$2,800; Capt. Adams, three cottages, \$3,000; J. E. Cook, two-story frame, \$3,100. The above are from the office of Chas. Wheelock.

W. S. Smith & Co. have in their office the following: Remodeling M. E. church of Columbus, Miss., \$3,000; remodeling residence of Mrs. R. E. Moore, Columbus, Miss., \$2,000; J. A. Allen, residence, two story frame, \$4,000; W. H. Somerville, two-story frame, \$2,000; Frank Smith, two story frame, \$2,500; Jno. Ryan, two-story frame, \$4,000; E. T. Hollingsworth, two-story frame, \$3,000; W. L. Woodruff, one-story frame cottage, \$2,500; S. B. Handby, two-story frame storehouse, \$2,000; J. A. Allen, three-story flat; two pressed brick fronts; galvanized iron trimmings, \$10,000; P. Rising, three-story brick warehouse, \$4,500; M. J. Gregg, three-story brick flat; iron front store \$7,000; C. H. Worrell, three-story brick flat; pressed brick front; stone and galvanized iron trimmings, \$5,000; Moore & Fitzgerald, three-story flat; pressed brick front; stone and galvanized iron trimmings, \$5,000; Mr. Hutton, two-story frame cottage, \$2,500; Mr. Brown-Lee, two-story frame cottage, \$2,800; Mrs. Nabers, frame cottage, \$1,000; Mr. Sharpe, addition to storehouse, \$2,000. The above are only a few of the many improvements, but enough for one report.

Chicago.—The labor situation has gradually taken a more settled shape, and during the past two weeks a considerable revival, amounting to an unusual summer activity has taken place. Because of the unsettled condition in which many of the different labor units allowed their methods of proceeding to remain in two months ago and men still clinging to the impracticable and exploded idea of an eight-hour day, there exists a sort of armed truce which will be broken by those working eight hours as soon as work becomes sufficiently plentiful to allow a strike for higher wages with any chance of success. The carpenters have been troubled by some small bands of strikers visiting buildings in the outlying districts and intimidating and assaulting workmen. This matter has been taken in hand by the association of master carpenters and all cases will be prosecuted. The master carpenters have shown a spirit above all the other trades in the way of insisting upon running their own business, and while others, particularly the masons, have allowed themselves to be thoroughly controlled by the bricklayers' and other unions the master carpenters have given work to any good man who might apply and have had no trouble except from riotous persons from the unions, as there are more carpenters in the city than can find employment.

The architects' offices are again presenting a busy appearance and, with many, the amount of work coming in precludes all thought of a summer vacation. Except the ever present chance of the disturbing element in the unions precipitating a strike, the fall promises to be exceedingly busy.

Architect Clinton J. Warren reports: For Wm. Trego, two-story and attic and basement residence, 30 by 65 feet, to be built at Kenwood; first story brick, second story slate; copper cornice, carved wood lintels, hardwood finish, steam heat, closets, bath, marble mantels, electric bells and speaking tubes; cost \$9,000; to be commenced at once.

Architects Flanders and Zimmerman report: For A. Lanquist, three three-story flats, 45 by 70 feet; brick, stone trimmings, galvanized iron cornices, composition roof, closets and bath, stained glass skylights; to be built on Hill street, between La Salle and Wells; cost \$15,000; contracts not let. For E. Brown, three-story store and flat building, 25 by 100 feet, at 288 W. Madison street; brick, stone trimmings, felt roof, galvanized iron cornice, hardwood finish, closets and bath, stained glass skylights, etc.; cost \$10,000; to be commenced at once. For Mrs. M. E. Hanley, alterations to four-story building at 37, 39 and 41 State street; cost \$20,000; a new passenger also a freight elevator will be placed; Thos. Nicholson, mason contractor. For J. H. Schwartz, three-story store and flat building, 25 by 90 feet, at Fourteenth and Jefferson streets; brick, stone trimmings, felt roof, galvanized iron cornices, hardwood finish, closets and bath, skylights, etc.; cost \$8,000; to be commenced at once.

Architect J. J. Flanders reports: Preparing plans for six-room school at Brighton; cost \$25,000; ready for bids August 15. Also for eighteen-room school house at Portland avenue and Twenty-third place; cost \$6,000; ready for bids August 15.

Architect C. E. Lohman reports: For P. Nelson, frame building, 22 by 45 feet; cost \$2,500. For Mr. Braack, two-story and cellar flats, 22 by 68 feet, Anderson pressed brick, stone trimmings; cost \$4,500. For H. F. Hansen, three-story and cellar flats, 21 by 70 feet; Indiana pressed brick, stone trimmings; cost \$5,000.

Architect G. Isaacson has let contracts for a three-story dwelling, 24 by 85 feet, at 341 N. Franklin street, for Clemens Jeffers; Anderson pressed brick, Lemont stone trimmings; cost \$12,000; M. Woodstrom, mason, Sungren & Bush, carpenters.

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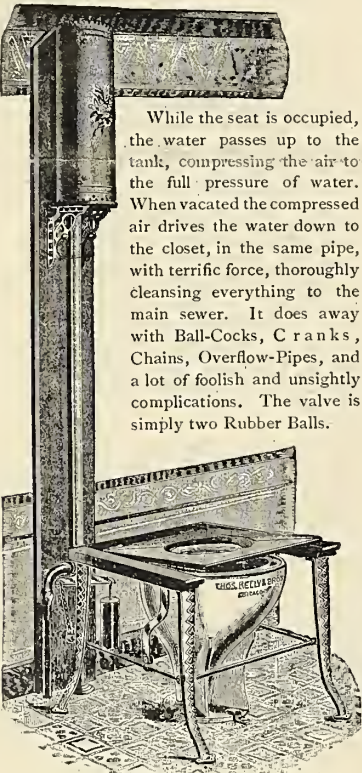
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FIG. 3.

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SOLDIERS' HOME.

Notice to Contractors.

Bids will be received until 12 o'clock M. of the 3d day of August, 1886, for the erection of a building for a Soldiers Home at Marshalltown, Iowa, in accordance with the plans and specifications for the same, adopted by the board. The plans, specifications and copies of the law can be seen at the office of A. F. Harrison, Esq., in Marshalltown, and at the office of J. S. Blake, architect, Des Moines, Iowa. The proposals must be marked "Bids for Soldiers' Home," and directed to the undersigned, in care of Col. E. Shurtz, P. M., Marshalltown, Iowa. The Commissioners will meet at Marshalltown, August 3d, for the purpose of opening and considering the bids.

J. M. TUTTLE,

President of Board.

NOTICE TO CONTRACTORS.

OFFICE OF COUNTY AUDITOR,

NEW LEXINGTON, OHIO, July 14, 1886.

Sealed proposals will be received at this office up to noon of Friday, August 13, 1886, for furnishing the material and performing the labor necessary to erect a new Jail and Court House according to plans and specifications on file in this office. Bids will be received for the different mechanical branches of the work and for the whole job. Bids must be made according to law—each one accompanied by a certified check or bond. Blanks for bids and bonds can be had at this office. The right is reserved to reject any or all bids. By order of County Commissioners.

A. F. RANDOLPH,

County Auditor.

Further Notice.

Contractors will further take notice that they are, at the time of making said above proposals and in connection therewith, requested and invited to specify the amount they will allow and bid for the material in the old Court House building, which material, so far as approved by the architect, may be used in the construction of the new building at such places as said architect may allow, and the said bids for said material shall be separate from all other bids and shall include the taking down and removing said building from the ground.

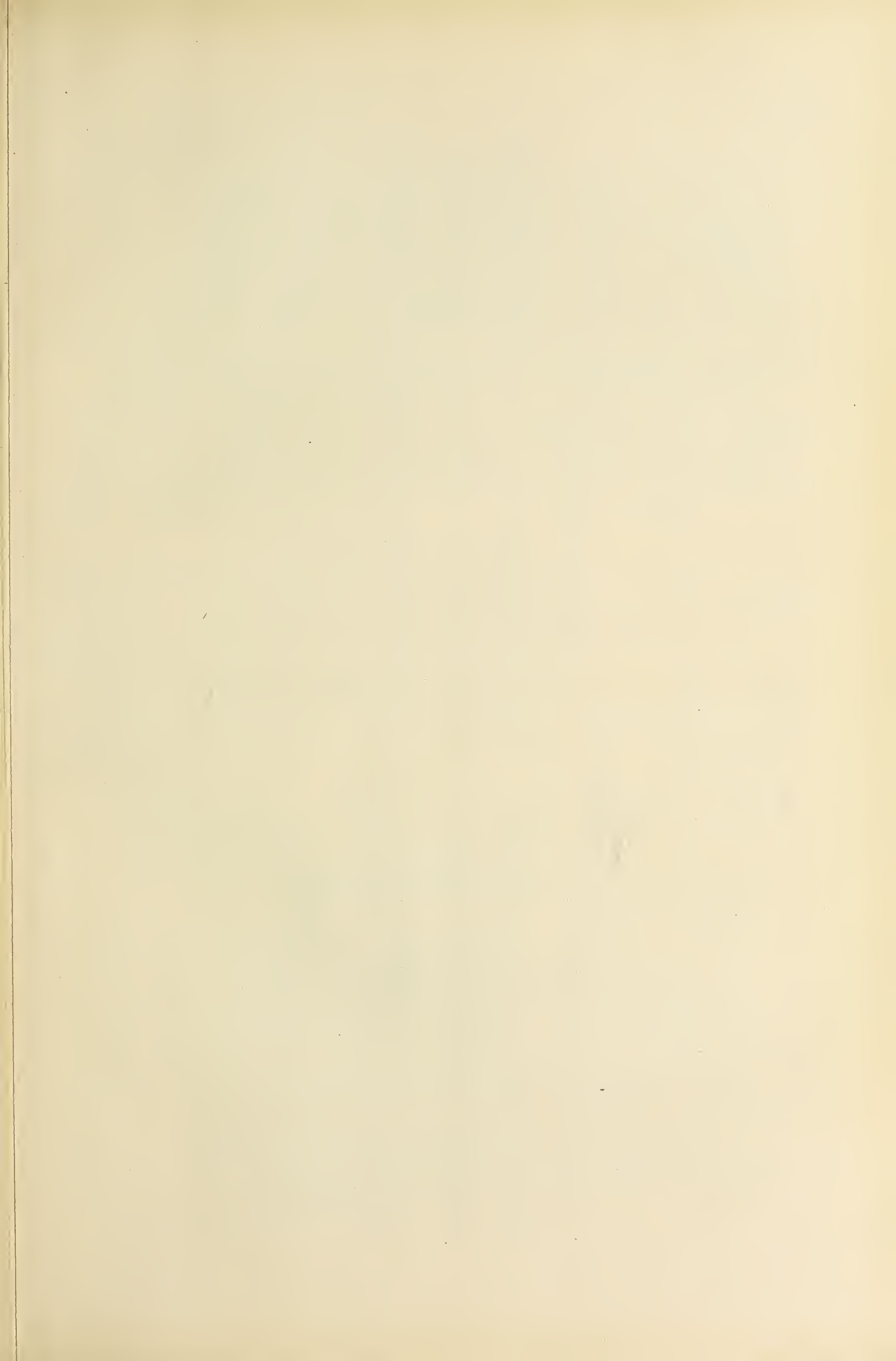
A. F. RANDOLPH,

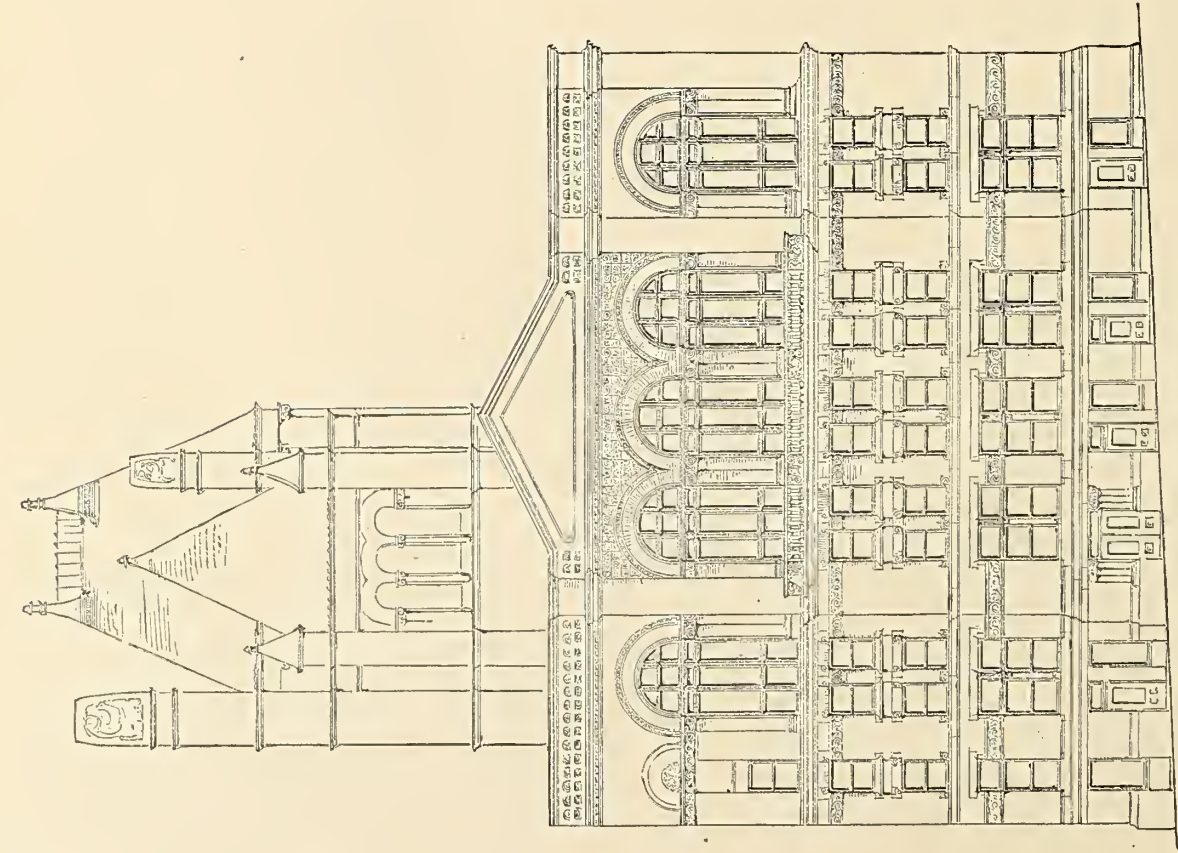
County Auditor.

PROPOSALS.

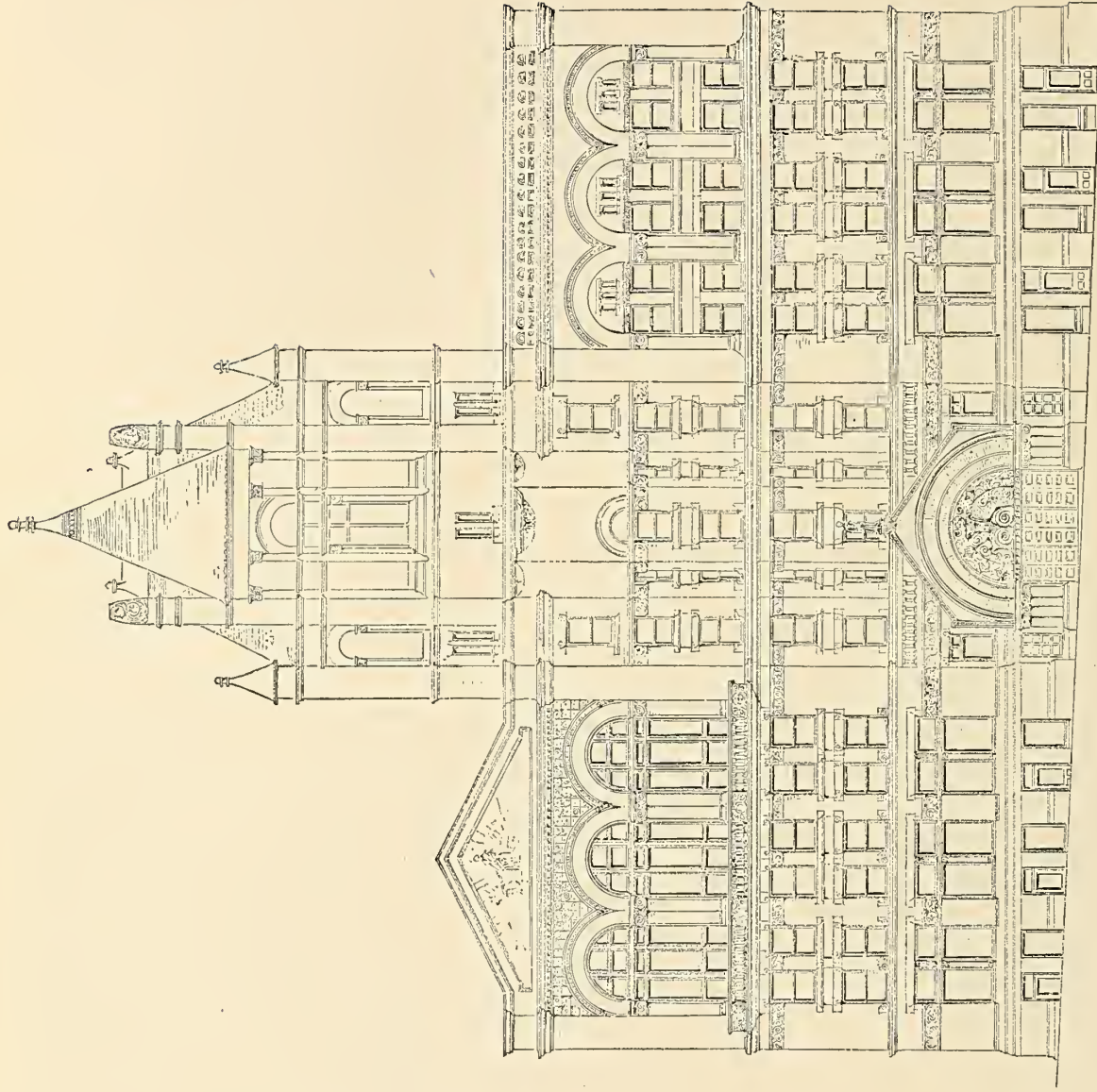
The Board of State House Commissioners for the State of Kansas will receive competitive plans for the completion of the central portion of the State house at Topeka, Kansas, at their office in Capitol square, Topeka, Kansas, on the fourth day of January, 1887, at 4 o'clock p.m.; said plans to consist of first, second and mezzanine floor plans, south and east elevations and transverse and longitudinal sections, all to a scale of eight feet to an inch, size of plan to be governed by plans of basement story, already adopted, to be seen at the office of the Board, style of architecture to be in harmony with the wings already built. The Board of State House Commissioners will employ such skilled assistants as they may deem advisable to sit with them as an awarding committee. The Board of Commissioners will pay \$3,000 for the best plans submitted and \$1,500 for the second best, the plans for which premiums are awarded will become the property of the State of Kansas, with the right to use the whole or any part or any modification thereof, without further claim from the authors for compensation or employment. Carefully prepared estimates of the cost of erecting and finishing the building will be required to accompany each plan submitted. The Board reserve the right to reject any and all plans submitted. By order of the Board of State House Commissioners of the State of Kansas.

E. B. ALLEN, Secretary of the Board.

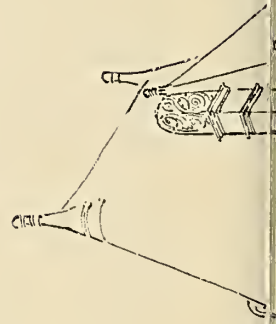


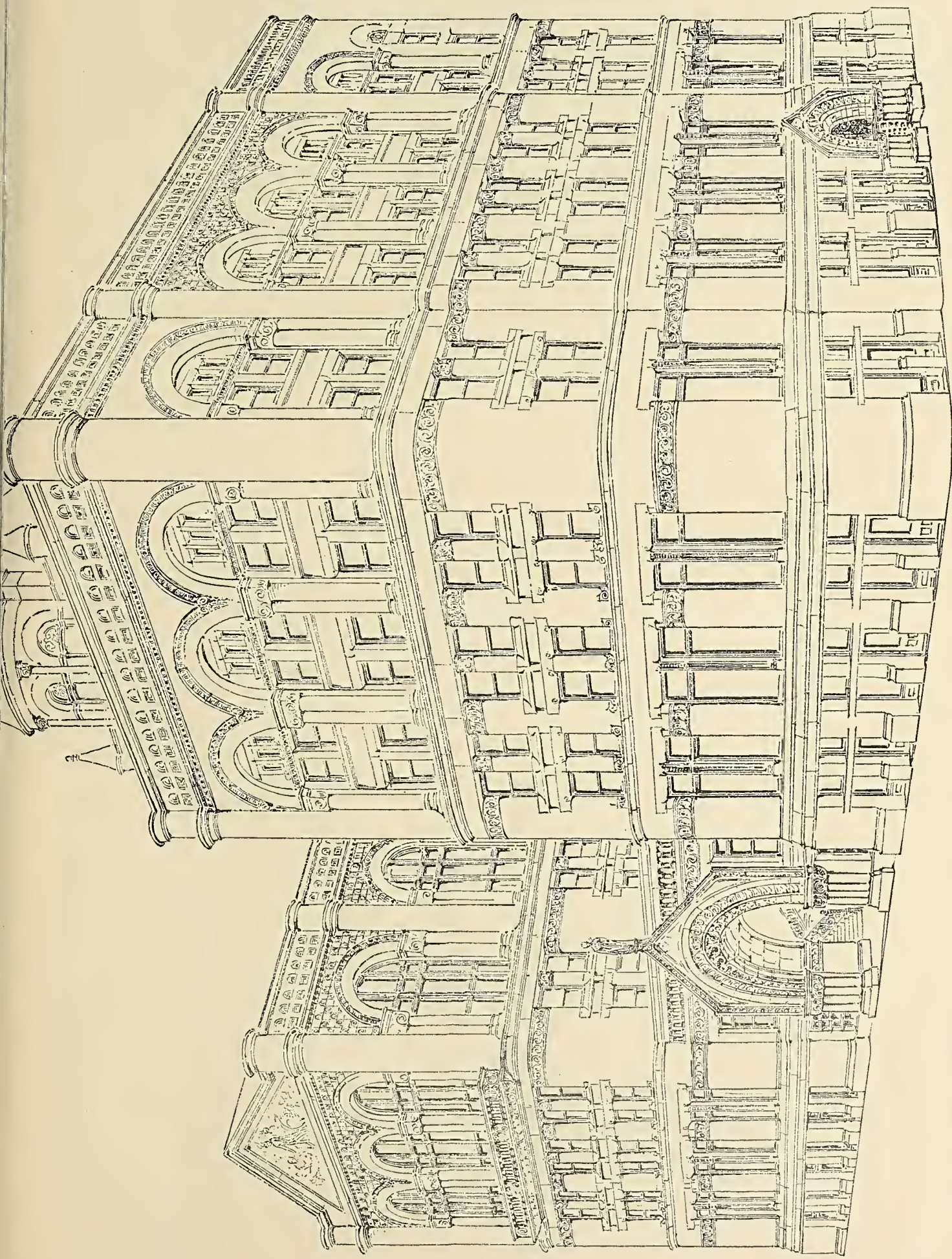


WEST ELEVATION



SOUTH ELEVATION.





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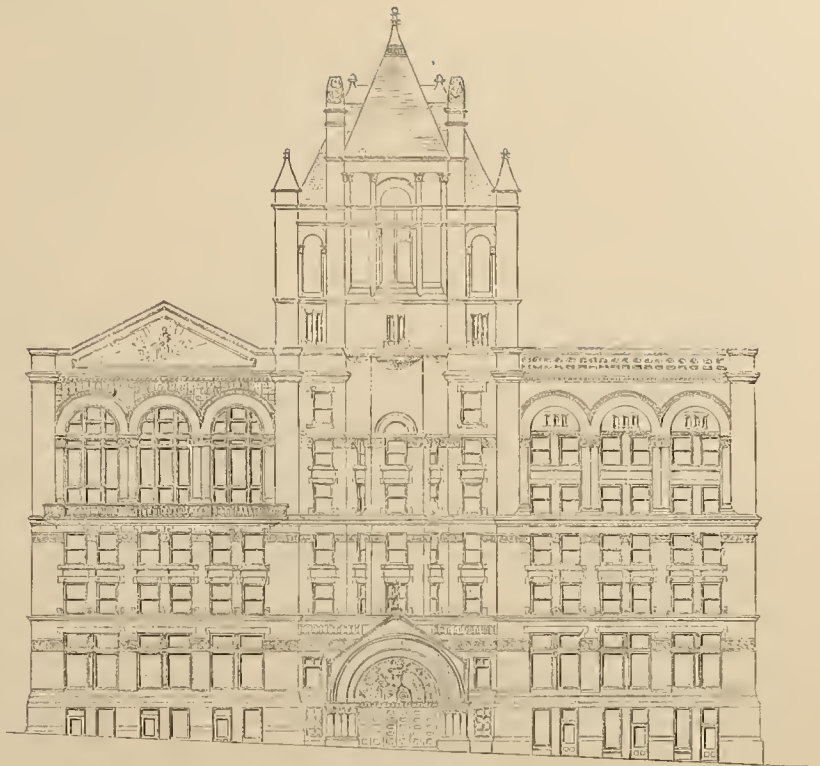
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ACCEPTED DESIGN FOR KANSAS CITY EXCHANGE BUILDING.

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SOUTH ELEVATION.

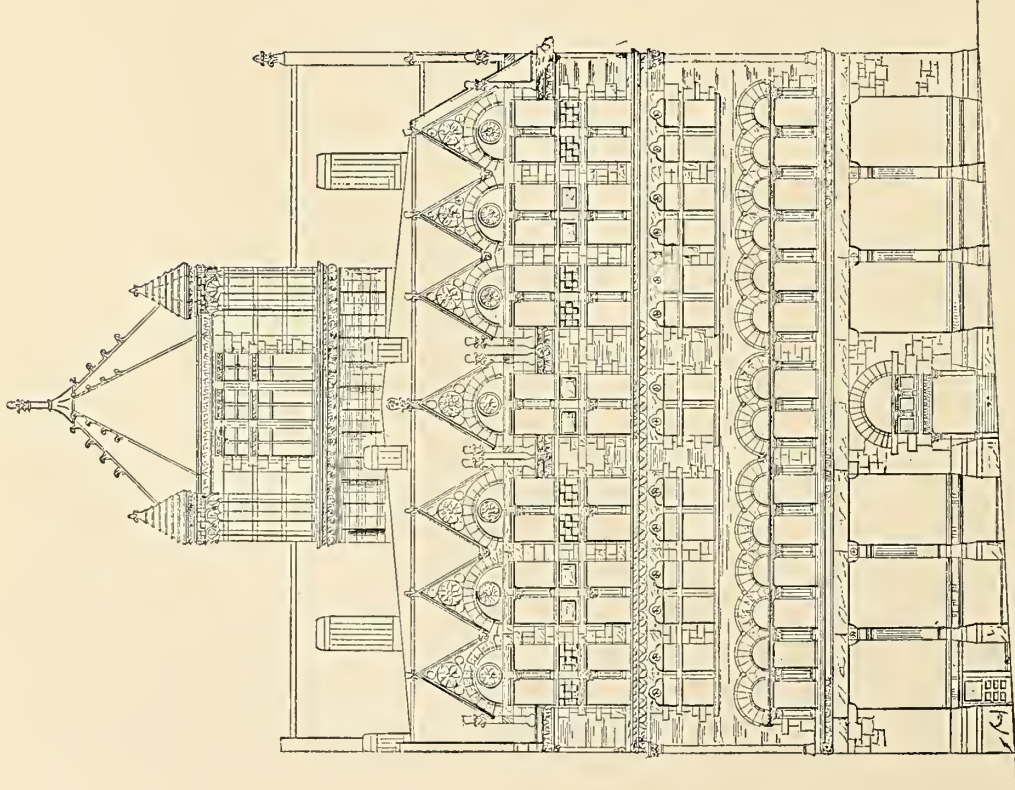


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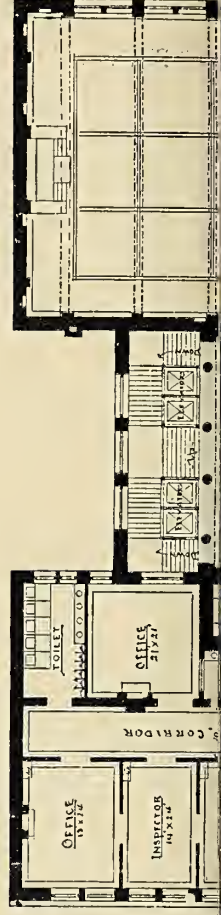
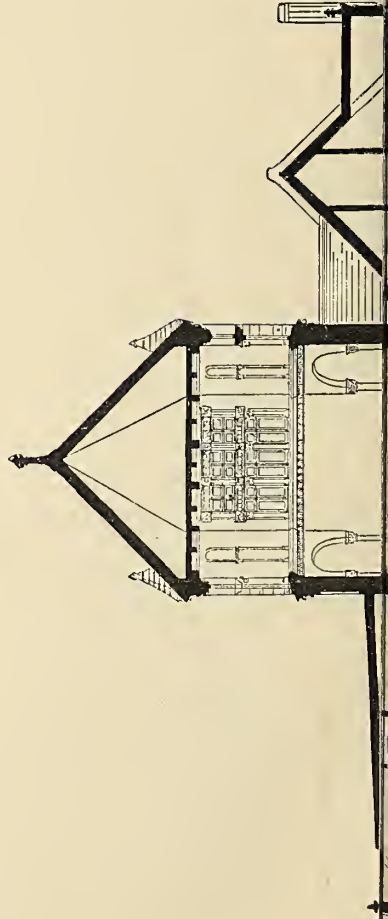
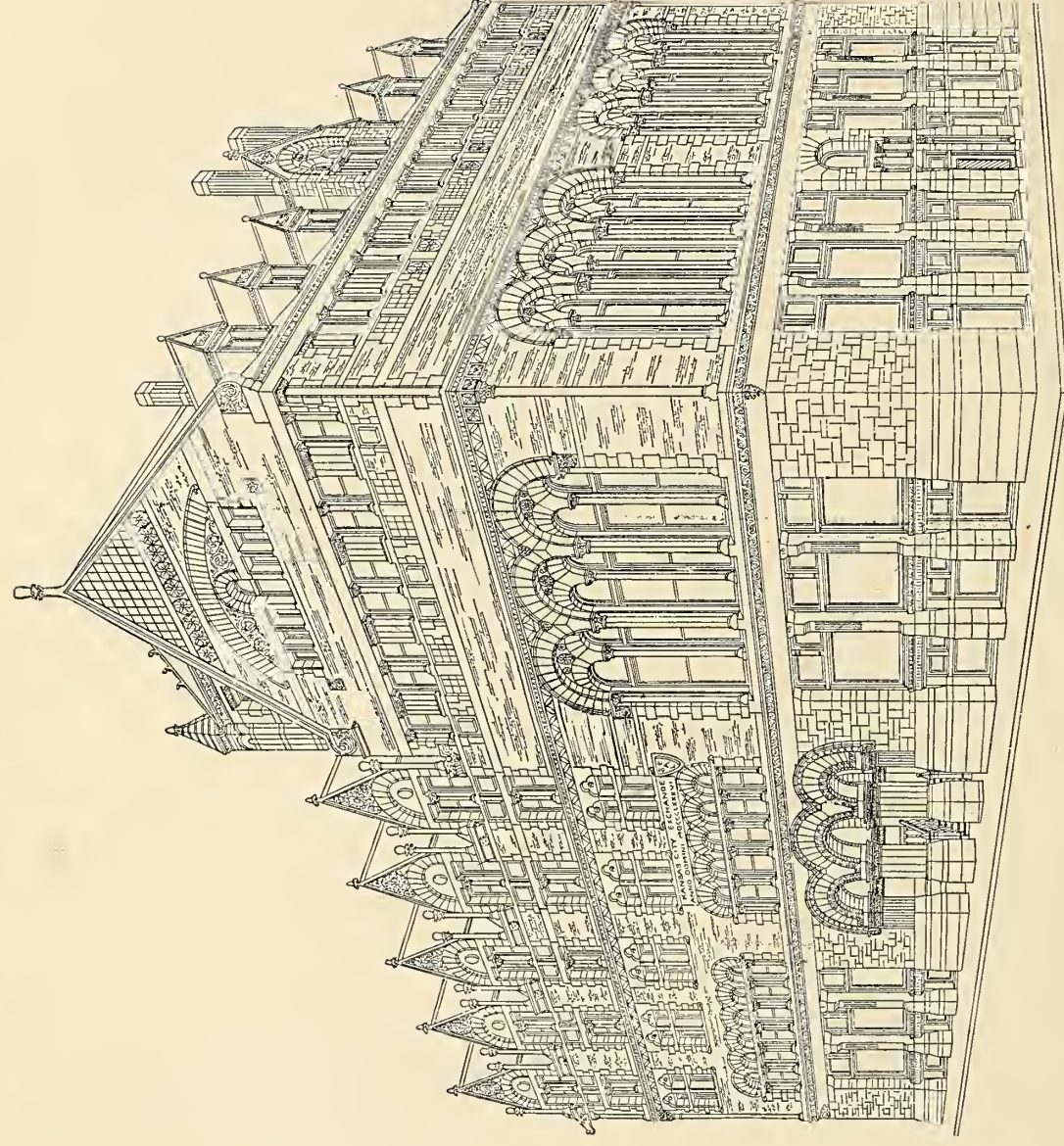
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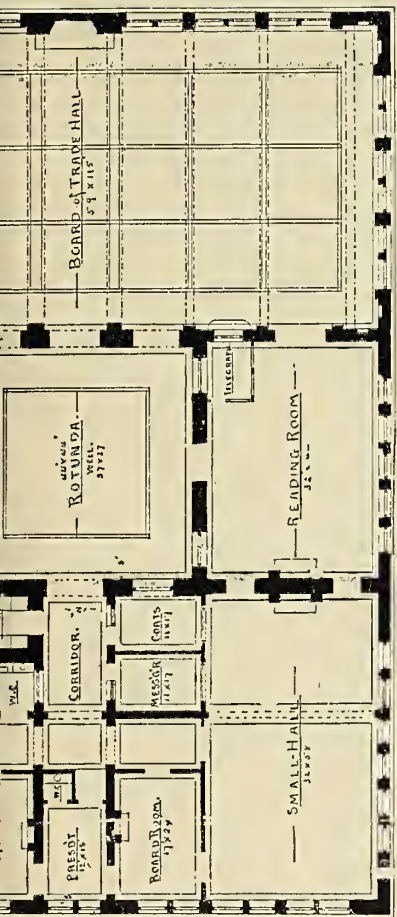
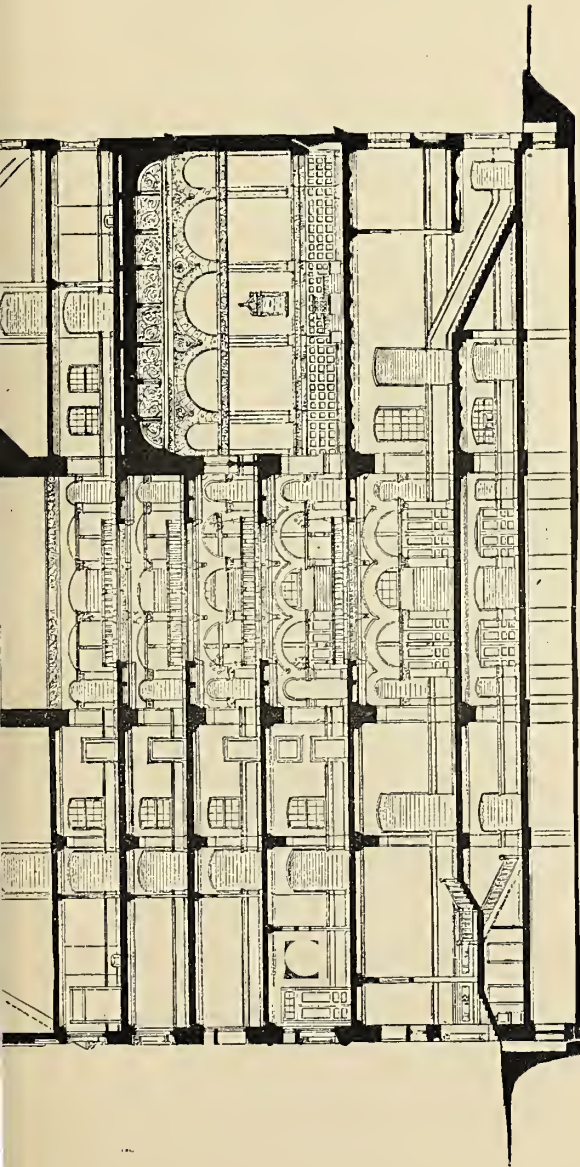
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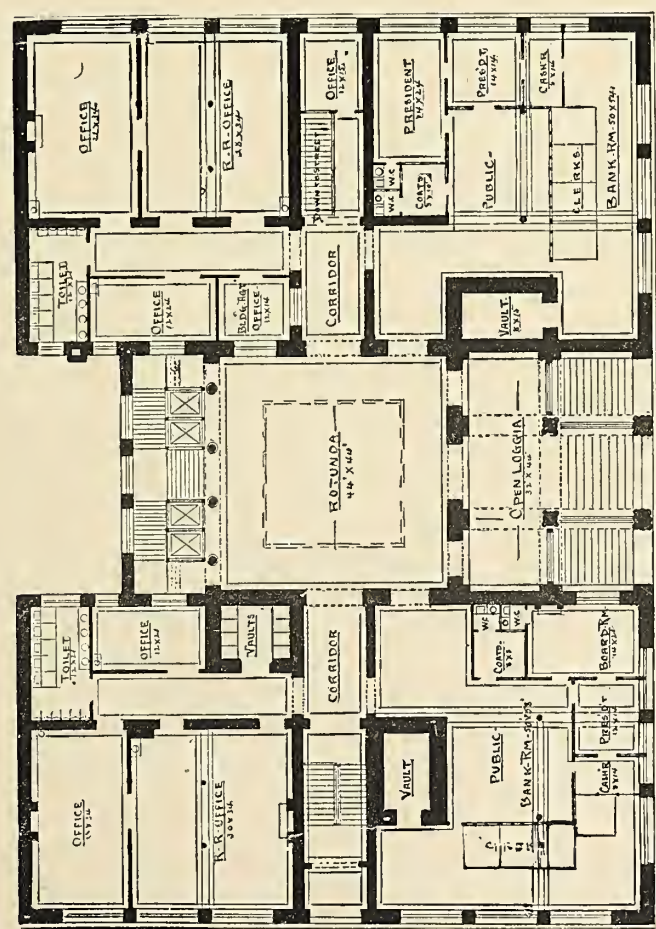


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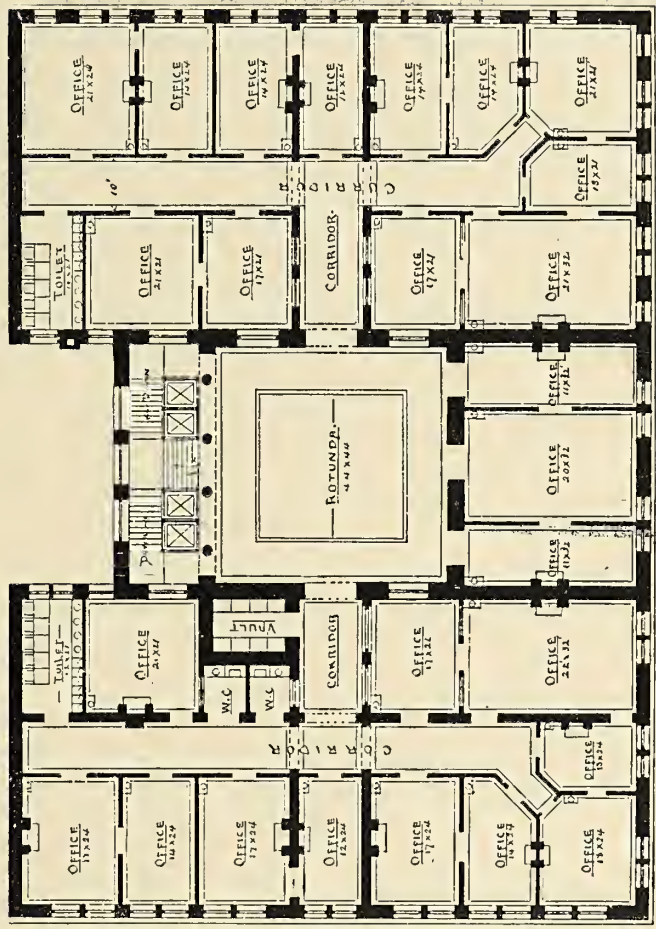




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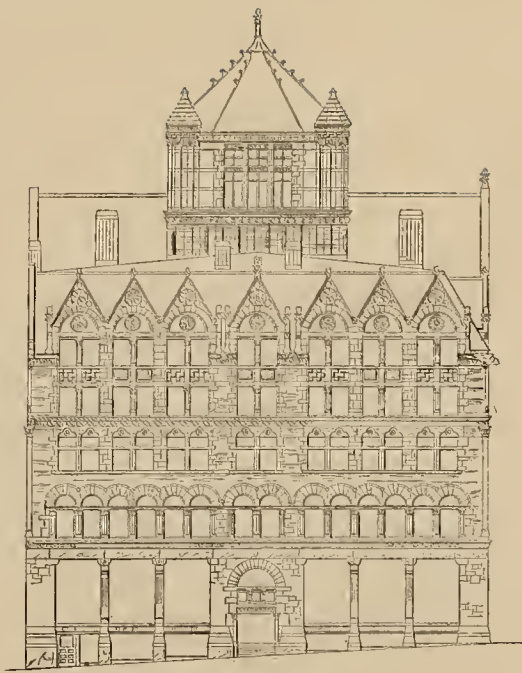
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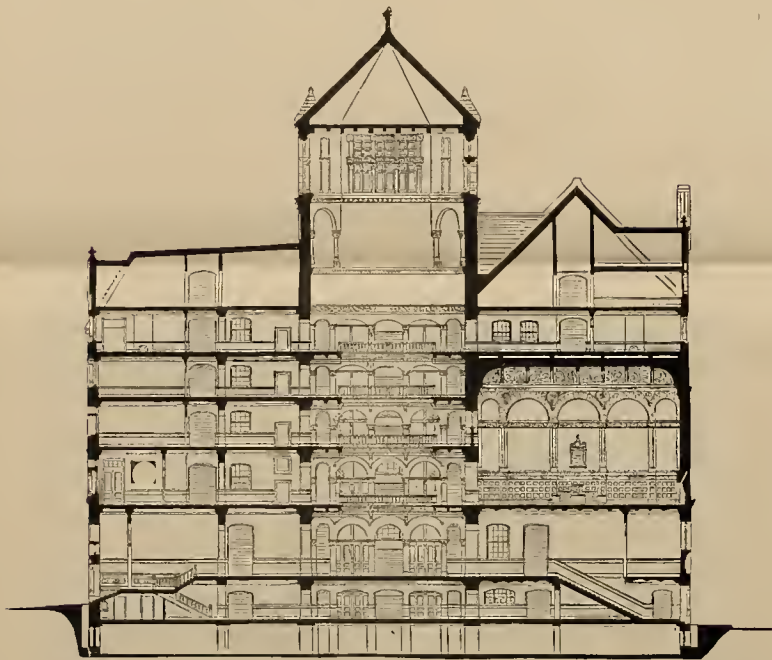
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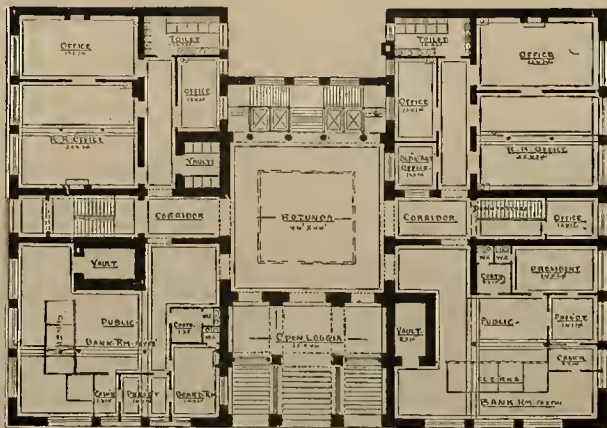
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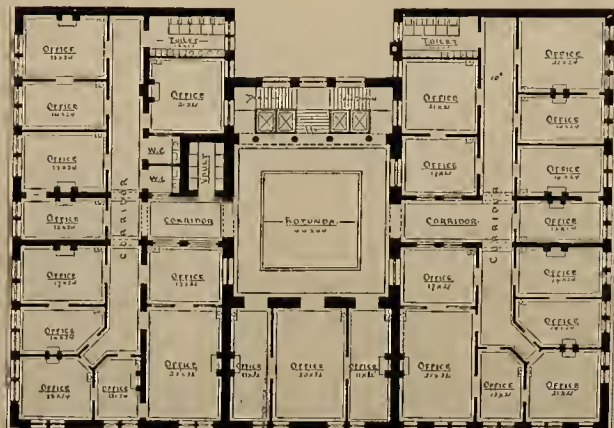
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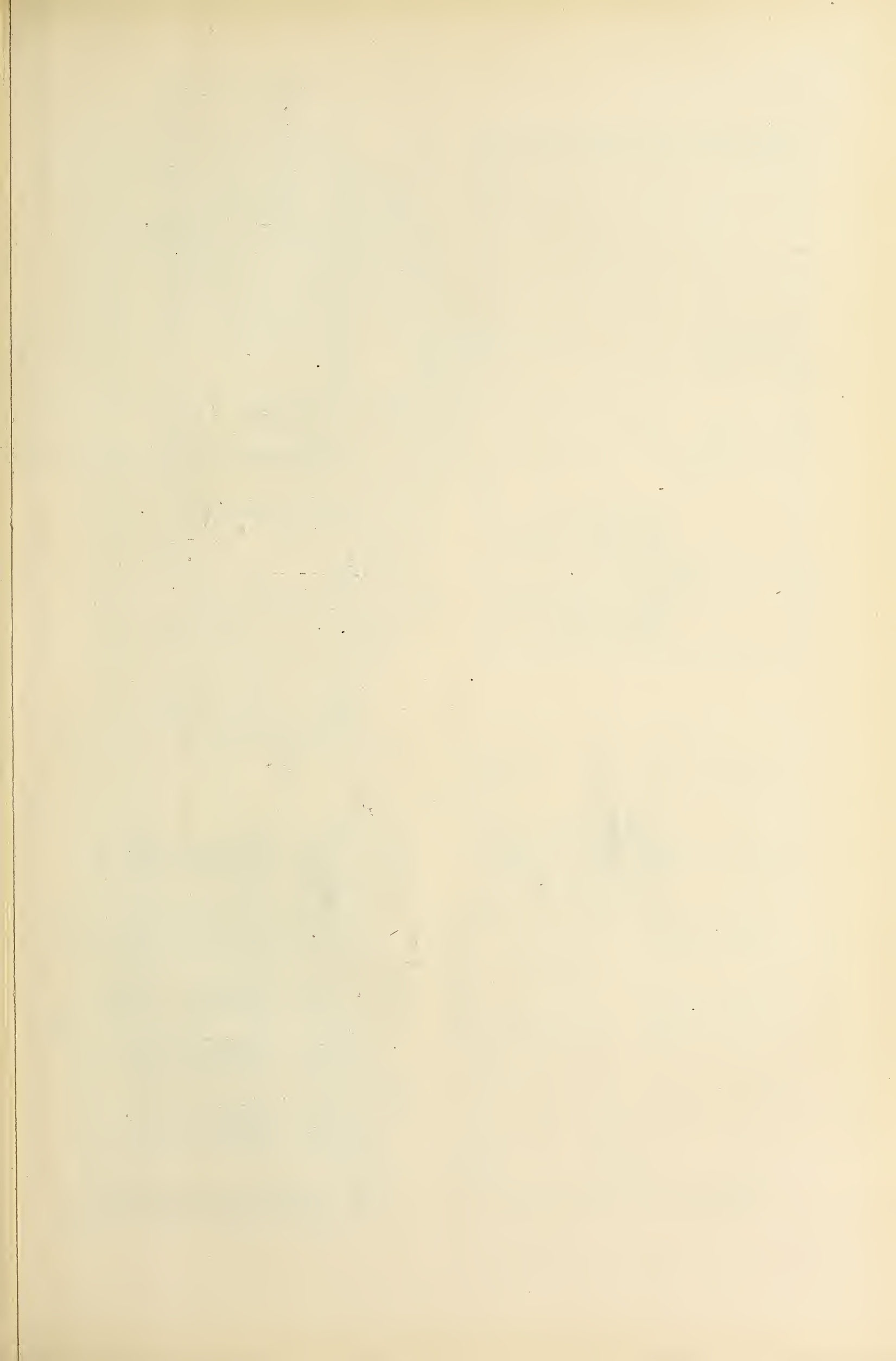
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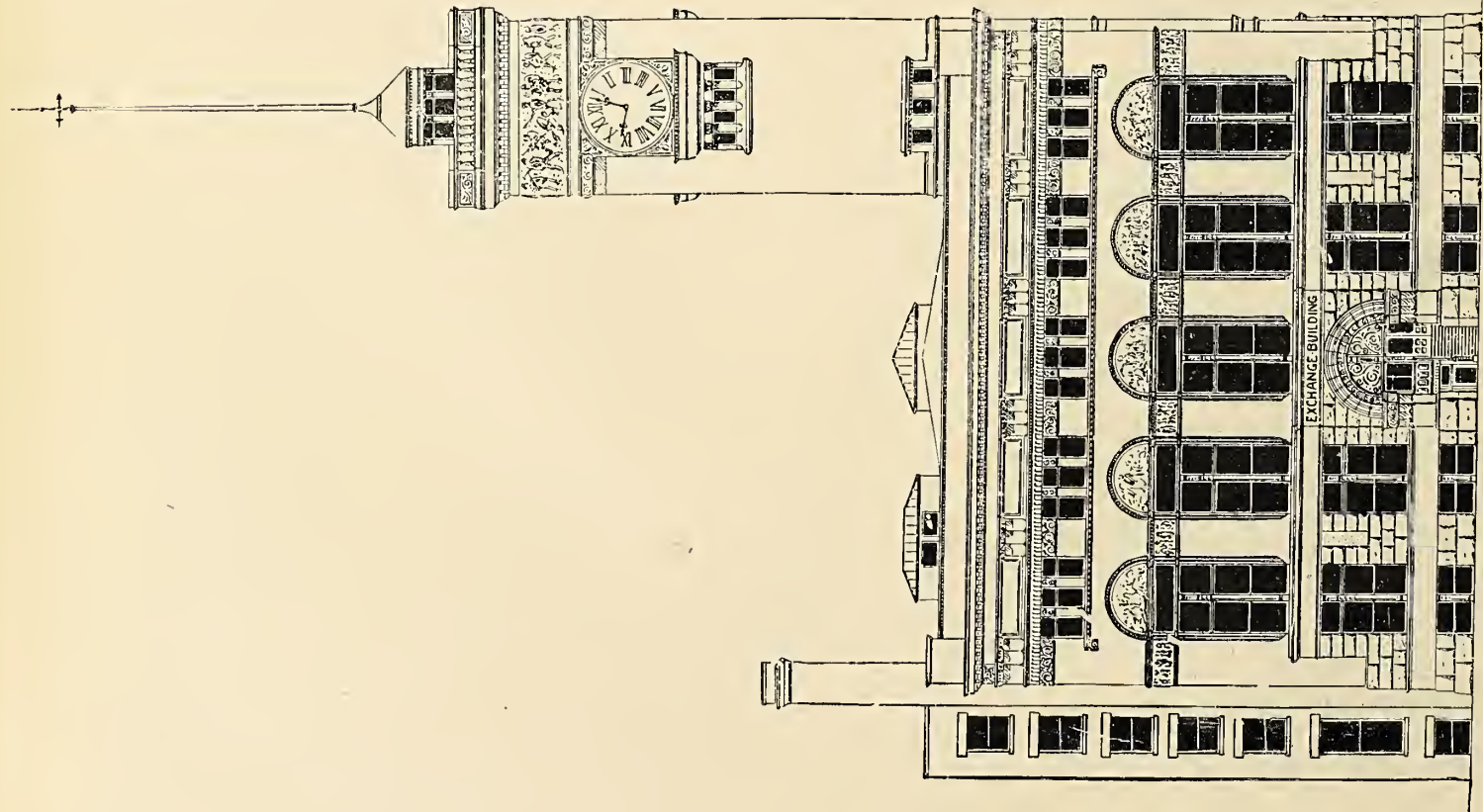
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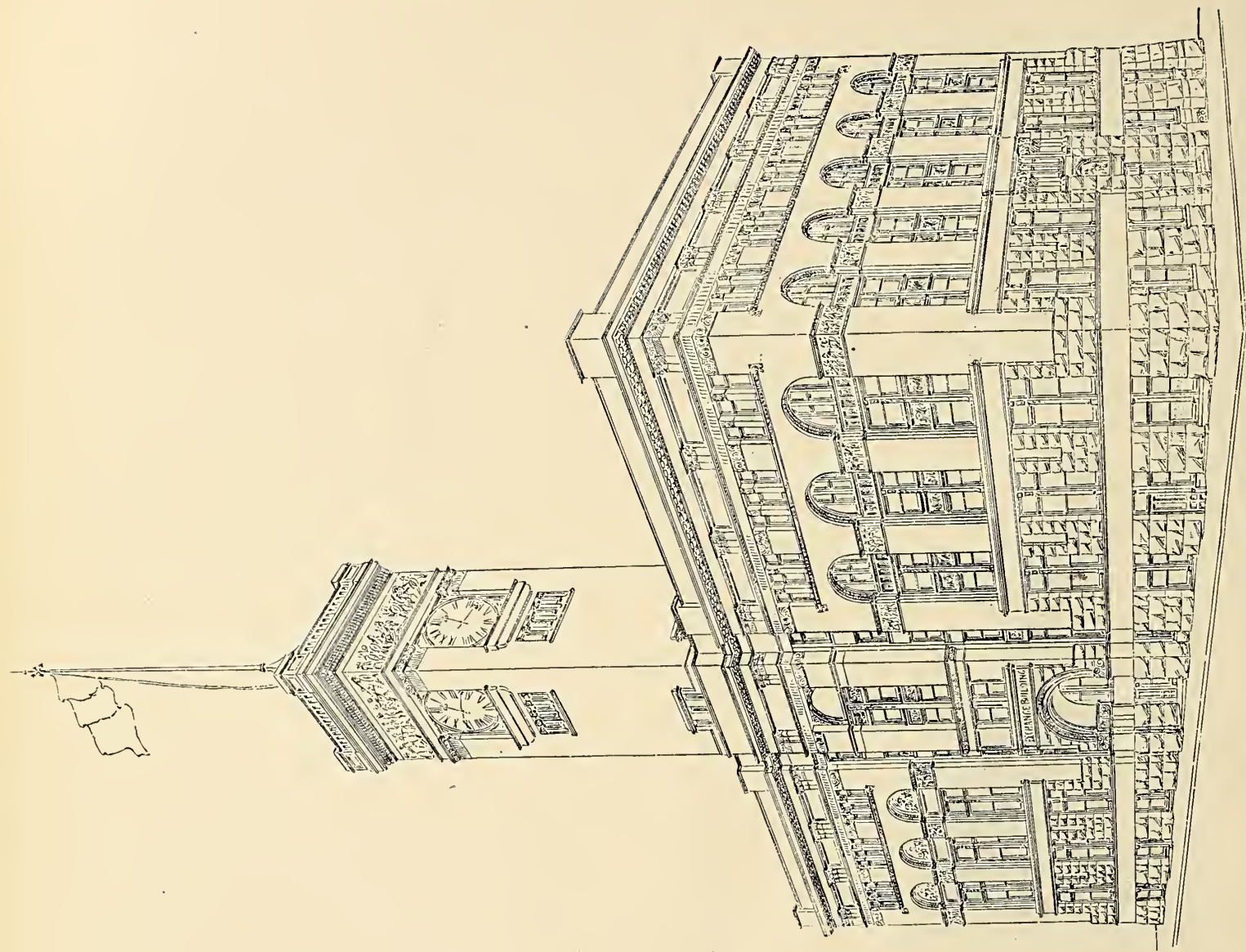
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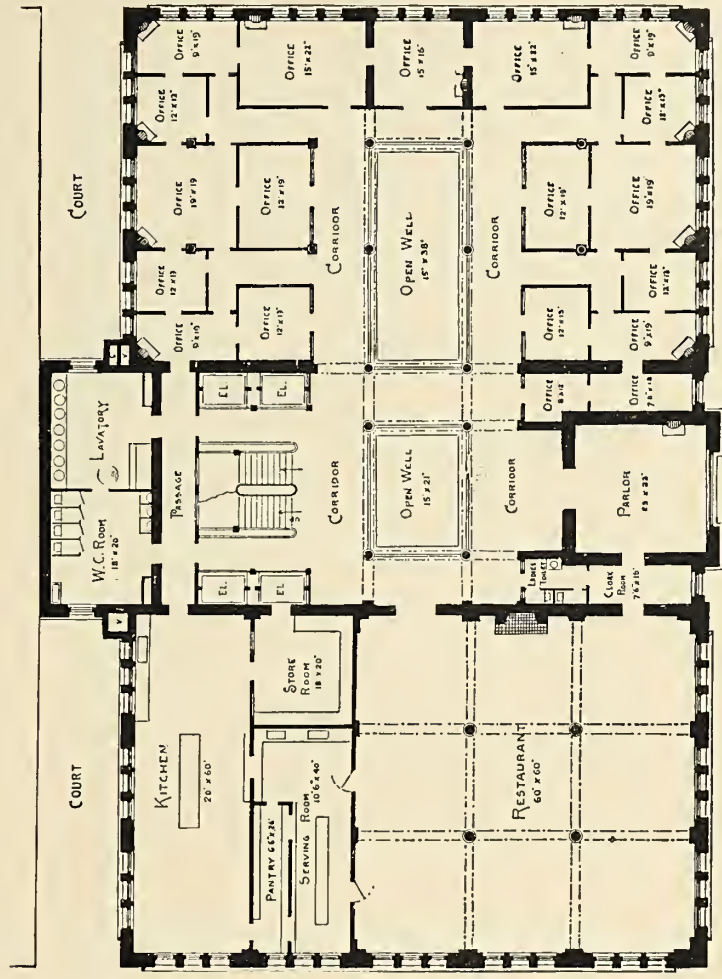
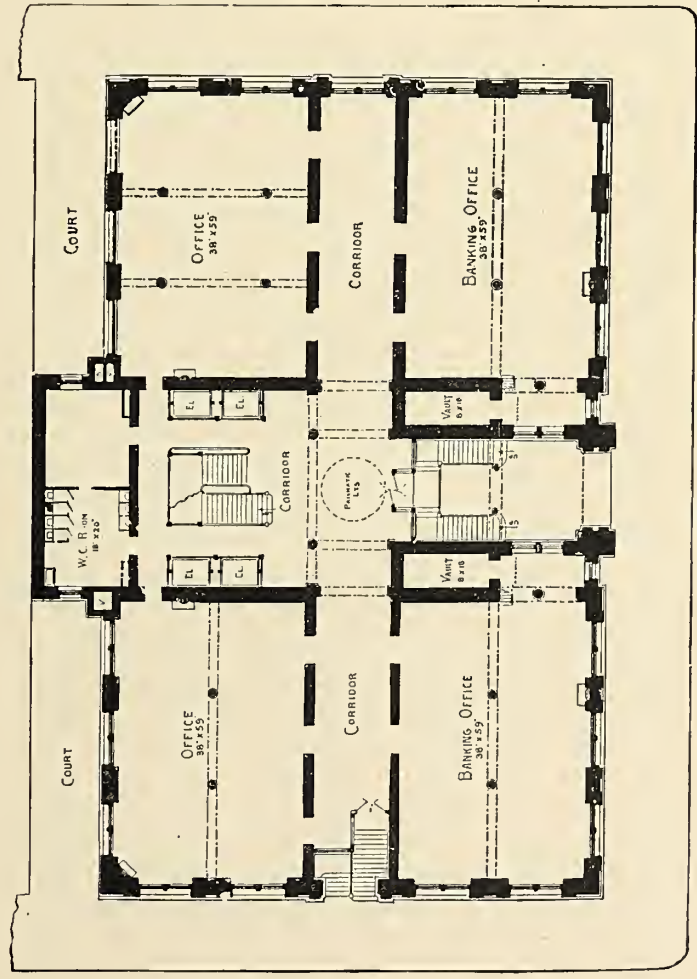
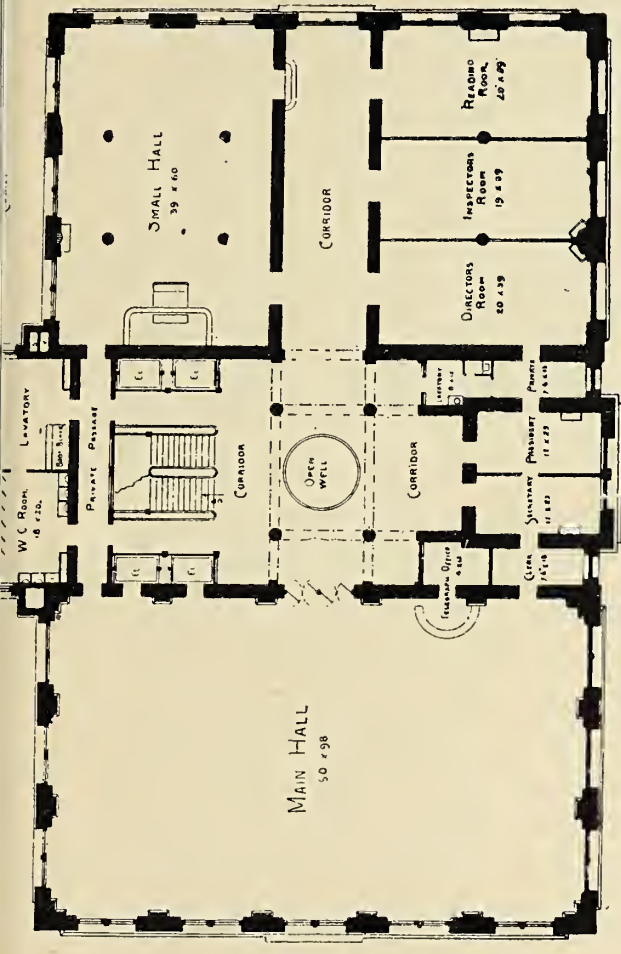
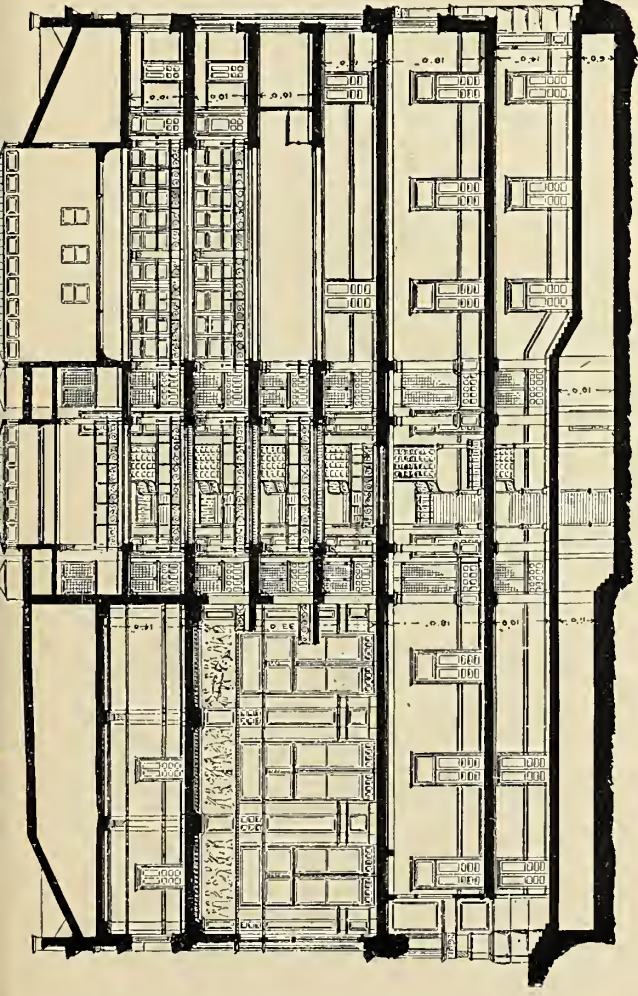
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CANAL STREET ELEVATION





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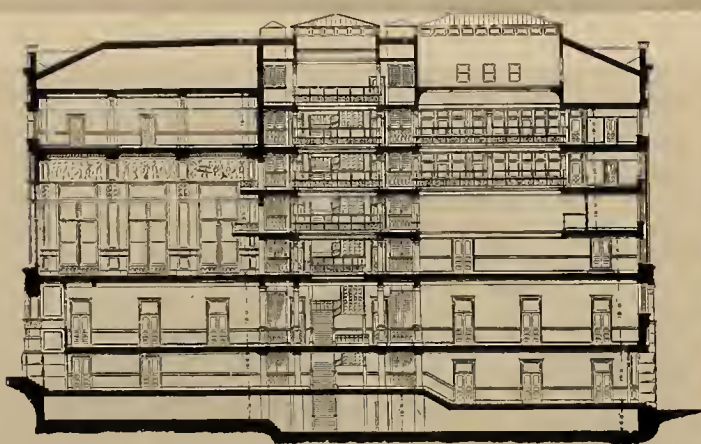
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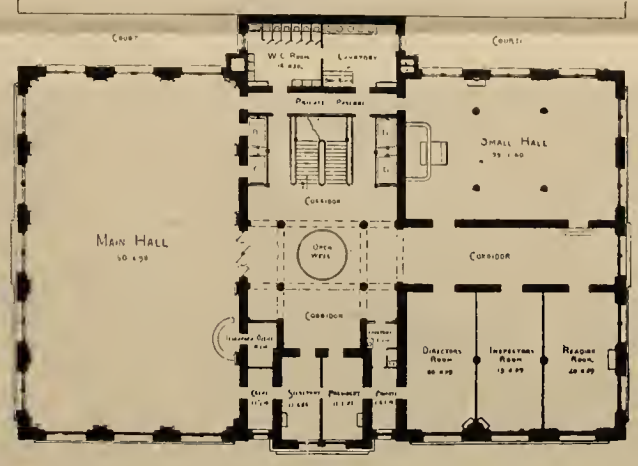
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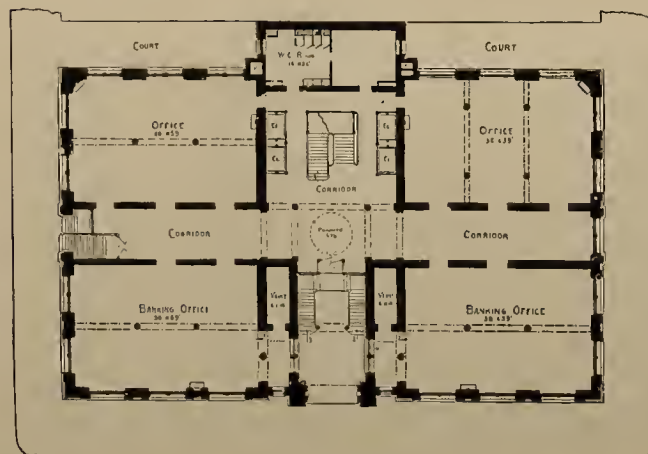
CANAL STREET ELEVATION



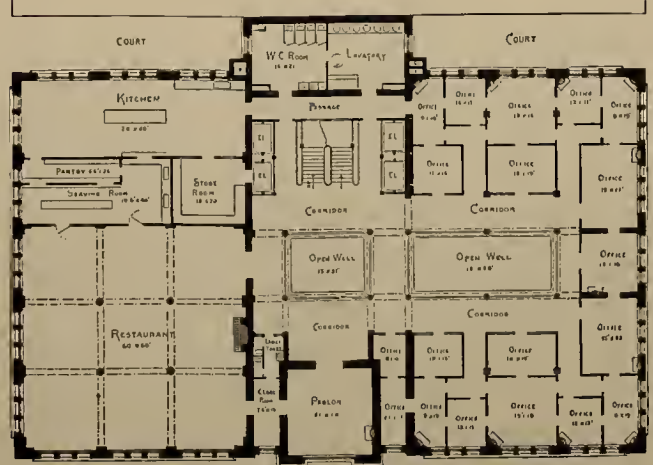
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SECOND FLOOR.



FIRST FLOOR.



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THE INLAND ARCHITECT AND BUILDER.

Vol. VIII.

No. 1

AUGUST, 1886.

THE INLAND ARCHITECT AND BUILDER

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Construction, Decoration and Furnishing
IN THE WEST.

OFFICIAL ORGAN OF THE WESTERN ASSOCIATION OF ARCHITECTS
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THE successful termination of the competition for a chamber of commerce at Kansas City, of which we gave the general facts and details in our July issue, has interested the profession generally throughout the country, and those who have watched the solution of the competition problem in foreign countries will doubtless learn with satisfaction that the architects of at least one country can, while recognizing that competitions are a necessary evil, carry them through successfully with nothing but honor to those competing. True, the importance of the building is local and the sum involved insignificant, compared with that of many late European competitions, such as that for the law courts at London, but the same esprit was called for and has not been found wanting. The intelligent solution of the problem where the maximum of cost was laid down, and the best architecture the country can produce offered, without exceeding it, is certainly a work of the most careful training in the practical as well as in the æsthetical province of architectural work. We have sought, in showing the accepted design, as well as those highest adjudicated upon by the committee, to present with them a history of the competition, giving the plan upon which the competition was arranged, and have collected as far as possible all the facts in relation thereto.

THE instructions for the competition were drawn up in the spirit of the code adopted by the Western Association of Architects at their last meeting and were more fully outlined from a tract upon competitions prepared some ten years ago by Prof. W. R. Ware for the American Institute. The scheme for the management of the competition, as may be seen, differs from the code in several important particulars, mainly that of the appointing of expert judges. While in the former but one expert is employed, the code provides for three; one appointed by the building committee, one by the competing architects, and one by these two, each one of the jury to be an expert architect, in good standing, and not from the town where the building is to be erected. This, we think, will be found the better way, for while the judgment of the expert in the case under consideration has been universally praised and not a voice has been raised in dissent, this might not always be the case; with all the safeguards which might be thrown around the competing designs, there might be found some fancied ground for the charge of favoritism. But we are not disposed to criticize, for the terms upon which the designs were made, with the creditable result, places this so far in advance of and above many of the competitions, so-called, of the past, which have brought not only enormous expense without adequate return to those for whom buildings have been erected, but disrepute upon the architects, that we look upon it as the beginning of an architectural era when the costly structures called "public" will be the architectural glory of, instead of a by-word and disgrace to the country.

WHILE Professor Ware, in his report, says nothing definite in regard to the general architectural style followed in a number of the designs, he mentions that "sixteen were designed in some variety of Roman or Renaissance architecture, nine with a tolerably strict and nine with a somewhat free use of Romanesque or round-arched mediæval motives, and not a single one in the pointed Gothic style, either modern or mediæval, which twenty years ago, or even ten years ago,

was almost universal." This alone will show the rapid advancement we are making toward an American style of architecture, which, beautified and modernized by Richardson, and outlined in most of the recent work of our best architects, may prove ephemeral as did the Gothic, but in all likelihood, and we feel that it is safe to predict, will be the foundation, and as far as adaptation will serve, the main feature of our architectural creations of the future. Our main object in thus fully presenting this competition, a work that will occupy one and perhaps two future numbers to complete illustratively, is that the profession may see the practical result of a competition upon a professional code, and forsake and absolutely refuse to draw a line in a competition that has not a carefully prepared code like that of the Western Association for its government.

THE Exchange Building Committee of Kansas City adopted this method through well founded motives of economy and utility, realizing that the best building the architects of America could produce would cost no more than if the plans were obtained for nothing and the architect secured his pay through margins in the way of "loans" from the contractors, or in additions and extras, an experience that few cities, counties or states have not met with to their cost. Knowing what public sentiment has been and is, the low estimate put upon architectural services, and the refusal of the average business man to recognize this when he would not think of prosecuting a case in court, or go through a dangerous illness without the services of a skilled lawyer or physician, we cannot give too much credit to the president of the Exchange Association and his co-workers. They have not only done wisely for the body they represent, but have placed their city before the country in the light of intelligence and enterprise in a manner that should excite the envy and imitation of those both east and west whose architectural beauty will be of the future, that of the past being marked by the one word regret. We of the West should not draw invidious comparisons, but eastern journals have pointed to the vast dissimilarity between the action of these gentlemen and a like committee in charge of an important building project in Boston. We would only point to the general history of competitions in America, and leave the weight of argument for our practical exposition of that of the Kansas City Exchange Building, to prove to the profession and public alike the wisdom of a general adoption of the code of the Western Association wherever a competition is called for, not forgetting that it is largely due to the active association movement which has called the architects of the nation and of the states into closer fellowship and united action that this competition with its satisfactory results was brought about.

AS it is expected that the convention of the Western Association of Architects, which will convene at Chicago upon the third Wednesday of November next, will be attended by the majority of those practicing architecture in the United States, it is not too soon for the different committees to begin active preparation to complete the work placed in their charge. Particularly is this true in regard to those charged with the work of collecting drawings for an architectural exhibit in connection with the convention. This committee consists of those who were appointed to organize state associations, and they should at once set about the work consigned to them. The best way, perhaps, is to notify architects in regard to the matter, and for them to send their drawings direct to the secretary of the Western Association, Mr. John W. Root, Montauk block, Chicago, who should

have charge of all drawings admitted to the exhibit. This showing of architectural work should be as comprehensive as the country the association represents.

WHILE American architects are wrestling with the competition problem, it is always interesting to observe the experiences of foreign architects with the same questions, and the expedients to which they resort in dealing with it. It is well known that a grand competition is announced for the design of the proposed new façade to the cathedral of Milan, open to all the world. The following are the conditions of this great contest: The plans must be received between the 1st and 15th of August, 1887. The jury will consist of fifteen members, as follows: one commissioner, one priest to be selected by the archbishop of Milan, and four architects to be named by the Academy of Fine Arts of Milan, of whom one is to be an Italian architect, one a German, one French, and one English; then the city of Milan will appoint two members, of whom one is to be an architect and one an artist, either a painter or a sculptor; the Monument Commission of Milan will also appoint an architect on the jury; the Milan College of Architects and Engineers will select an architect or an engineer; the Lombard Institute of Science and Letters will be represented by one expert, and the competitors themselves will elect the remaining four jurymen, two of whom must be architects, one a painter, and one a sculptor. There would appear to be no reason for doubt as to the expertness of this proposed jury. There will be seven grand prizes in the Milan competition; one first prize of 40,000 francs, three second prizes of 5,000 francs each, and three third premiums of 3,000 francs each. Beside these will be an indefinite number of other prizes of 2,000 francs each to be awarded at the discretion of the jury. A charge is made of five francs for the diagram of the present condition of the cathedral, to which the new front is to be added. This may be obtained on application to Ulrich Hoepli, Libraire de la Com Galleria de Cristoforis, 59—63, Milan, Italy. For further information parties can address "L'Administration de l'oeuvre de la cathedrale de Milan."

THROUGH the Belgian architectural journal, *L'Emulation*, intelligence is received of the recent death of an eminent Belgian architect of wide reputation abroad, though comparatively little known on this continent, M. Eugene Carpentier, born at Courtrai in 1819, a pupil at the Academy of Brussels, where at the age of twenty-six he secured the highest prize for proficiency in architecture. He afterward entered the office of M. Dumont, architect, and under his direction superintended the restoration of the church of St. Hubert. In 1861 he was established in business for himself at Belœil and quickly rose to fame through his wonderful activity and his remarkable successes at the various exhibitions of the time, gaining in rapid succession a medal at the Brussels exposition of 1861, a third prize at the Paris salon in 1867, a medal at the London exposition in 1871, another medal at the Brussels exposition in 1872, yet another medal at the Vienna exposition of 1873, and still another at the grand Paris exposition of 1878. For sixteen years he was also a member of the commission for the preservation of architectural monuments. Beside his exposition work, M. Carpentier had an extensive practice of a high order, being intrusted with the restoration or construction of numerous churches and castles, beside schools, hospitals, and other important work. In church work particularly his originality and success have given an impetus to many imitators, and resulted in the formation of what might almost be termed a

new school of architecture. M. Carpentier was personally of a retiring disposition, unambitious of notoriety. He had numerous pupils, who, with those architects who best knew him or his works, deeply lament his loss.

THE Conservators' League of America, is the name of a new society, which is probably destined to play an important part in the future of our industrial organizations. Formed but a few months ago, its ramifications already extend through several states where branch societies are being organized and disseminating the principles of the organization. As all great movements are started by some need to supply, or usually some wrong to correct, this has grown out of the labor troubles, men of wisdom with a desire for the future good of their fellows having resolved to place in active operation an organization which has for its object the practical realization of the scheme of coöperation between capital and labor. Though the society in question has taken in a manner the form of a secret body, it is only such as far as is necessary for perfect and uninterrupted work. Its membership is drawn from all conditions of men, the only requisite being that the applicant for admission be intelligent and a lover of law and order. The foundation of the society can perhaps be best told by Article I of its constitution, which reads:

The purposes of the Conservators' League of America are: To protect the legitimate business of the country against all unlawful and injurious interference, and to promote a better understanding of the true relations existing between employer and employés, maintaining the rights of each, and adjusting their differences.

The recent so-called labor troubles have largely arisen from a vital misapprehension of the true relations existing between all classes of business, and to counteract these injurious results and to protect all business interests and thus promote the highest good of all, is the mission of this society.

THIS movement was set on foot by Judge Mark Bangs, who has called to his aid an advisory board, composed of leading business men of Chicago, such as Morris Selz, N. S. Bouton, Wm. E. Frost, Chas. H. Morse, J. M. W. Jones and J. Irving Pierce, who, through the supreme secretary, W. H. Van Ornum, of Chicago, are vigorously pushing the formation of councils throughout the cities of the country. We look upon this movement as not only one to which every citizen deserving of the name should ally himself, but lend his earnest support. While we have not such a work to perform as the Union League during the late war, the future good of this great country seems to demand some such organized effort toward the protection and preservation of our trade, and in this citizens of every section have a vital interest. There can be no class favoritism, no fostering of the interests of one class to the prejudice of those of another, but all working together, holding the great producing capacity of the country in a solid and unshaken mass. To no other class does this call apply more closely than to those connected with the building trades and we, in the interest of our country and in our desire for the permanence of their activity call upon our readers everywhere to give this organization and its purposes their most earnest consideration and support.

THE conversion of the Exposition Building at Milwaukee into an auditorium for the Saengerfest which has recently been executed in that city, is quite interesting to the profession in demonstrating that a hall built for entirely different purposes, and found by experience to be unfit for successful use as an auditorium, can be so transformed as to make it possible for

every one of an audience of ten thousand people to hear and enjoy not only choral and orchestral music, but the voices of soloists even in pianissimo passages. We shall in a future issue publish, by the permission of the architects, Messrs. Adler & Sullivan, of Chicago, plans and sections illustrating this work, as well as the similar work executed in the Exposition Building of Chicago, for the musical festivals of 1882 and 1884, the National Republican and Democratic conventions of 1884, and the opera festival of 1885.

BUILDERS and traders' exchanges are being organized in all large cities, those notable ones in Chicago, Cincinnati, New York, and Boston serving as a model and incentive. The latest to form are those located at Indianapolis, Indiana, and Dayton, Ohio. The exchange at the former city starts with about 150 members, comprising all the leading manufacturers and contractors. At the initiatory meeting, June 30, the officers elected were J. A. Buchanan, president; G. O. Eldridge, treasurer, and Wm. P. Jungdclaus, secretary. The prime objects of this association, which are similar to those of all others formed, are thus expressed by their constitution.

The collection and dissemination of statistics and information of value to any or all of the several trades engaged in the building business; the mutual improvement and advancement of all artisans and tradesmen in their several vocations, connected with said business; the peaceable settlement of matters in dispute between contractors, subcontractors and employers; the advantage of a general place of meeting for the transaction of business; the establishment and enforcement of such lawful rules and methods of procedure as may be deemed for the best interests of the Association and its various members; and to do any and all things falling within the general scope of the business and procedures of such Associations.

The exchange at Dayton has a membership of 146, and is in a flourishing condition. John Rouser is president, Chas. W. Bell, secretary. No stronger influence for the good of the building trades and the protection of the public against all kinds of dishonest and unskillful work can be formed than that outlined by the constitutions of these exchanges. Like the association of architects, they comprise and are governed by the best and most reliable members, and bring into their work that close and honest competition which not only stimulates trade but gives to the public the best at the lowest figure.

THE constant attention and wise liberality with which the French people and government provide for thorough training of the young in artistic and industrial employments is a constant source of remark with intelligent foreigners interested in such matters, coupled with a never ending wonder that other nations are so slow to copy the example so long and successfully held before them. To take one example among many, a M. Mayer, of the department of the Seine, has proposed to donate to the state a sum which should yield an annual rental of 250 francs to be employed in providing prizes for those pupils of the department schools who excel in designing for the decoration of porcelain ware. The government after mature consideration has accepted this endowment and will hereafter institute annual competitions open to pupils of the national school of decorative arts, the national school of design for girls, and the municipal drawing schools of the department of the Seine. The decisions will be made and the prizes awarded by the minister of public instruction and of the fine arts. Thus these children of a wise and far-sighted government are not only born, surrounded on every side by art of the greatest variety and value, with museums, libraries, paintings and statuary, but their minds are carefully formed, and their tastes cultivated by painstaking instruction, while prizes of honor and of intrinsic value annually reward and stimulate the diligent. We are indebted to the *Gazette des Architectes* for the facts above stated.

The Exchange Building Association of Kansas City.

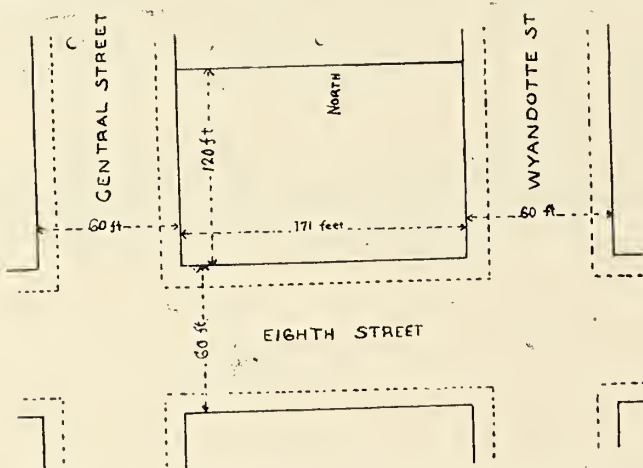
COMPETITION.

THE Exchange Building Association of Kansas City, Missouri, are proposing presently to erect a building for themselves and for other tenants, at an expense not to exceed \$400,000, and have appointed a building committee with full powers to select an architect to carry on the work. This committee has invited Messrs. Burnham & Root, of Chicago, Geo. B. Post, of New York, and Peabody & Stearns, of Boston, to each prepare a sketch or preliminary design for the proposed structure, for which they will be paid the sum of \$500 each. Notice has also been given, through the public prints, that the committee will receive and entertain designs by other architects not so invited.

All designs must be made in conformity with the following instructions:

INSTRUCTIONS.

The land belonging to the Exchange Building Association is, as appears from the accompanying diagram, a rectangular lot, bounded on the north by a party line, and having on the east a front of 120 feet upon Wyandotte street, a similar frontage on Central street to the west, and on the south a front of 171 feet upon Eighth street. Wyandotte street is about 7 feet lower than Central street, and descends about 4 feet to the north in the width of the lot. All these streets are 60 feet wide, including the sidewalks, and are to be considered as equally important, one with another.



This property is near the business center of the town, and the buildings in the neighborhood will probably range from 50 to 80 feet in height. The prevailing winds in summer are from the South, and in winter from the North, so that great extremes of temperature are experienced. In all seasons the southern exposure is the most desirable.

The soil is a thick bed of clay, lying upon limestone. There is no difficulty in getting a good foundation and good drainage. The water supply is abundant, and in respect to labor and materials, the facilities for executing good work do not differ greatly from those in other cities.

The external walls of the building are to be of face-brick and cut-stone (either sandstone or limestone), or terra-cotta. The entire structure, including the roof, is to be made as safe against fire as possible, either by the use of brick and iron, or concrete, or by means of some "slow-burning" construction, as may be determined hereafter by the committee in consultation with the architect.

The building is to be five stories in height, besides the basement, and is to have an entrance from each of the three streets, the principal entrance, if any, being upon Eighth street.

The first story above the basement will contain two banks. On the same story and in the basement, will be accommodations for railroad offices, etc. A restaurant with kitchen, etc., will be put either here or in the top story. The rest of the building except what is occupied by the Board of Trade will be taken up with small business offices. In these the windows must have square heads, and must run as near the ceiling as possible.

The banks at present occupy:

- A banking-room about 22 feet by 55 feet.
- A directors' room about 16 feet by 22 feet.
- A president's room about 10 feet by 14 feet.
- A cashier's room about 8 feet by 9 feet.

More ample accommodation than this is desired, together with a dressing-room and coatroom for clerks, etc.

The banking-room must be well lighted behind the counters, and have safes two stories in height, about 8 feet by 15 feet inside, with doors at the end.

The Exchange Building Association require:

- A large hall about 60 feet by 100 feet.
- A directors' room about 20 feet by 20 feet.
- A president's room about 10 feet by 15 feet.
- An inspector's room about 15 feet by 20 feet.
- A small hall about 30 feet by 60 feet.
- A reading-room.
- A secretary's room.
- A clerk's room.
- A telegraph office opening into the large hall.

If otherwise desirable the large hall may occupy the fourth and fifth stories, the other rooms of the Board of Trade being on the fourth story.

The rest of the building is to consist of large and small offices ranging in size from about 15 feet by 20 feet to about 15 feet by 10 feet and 10 feet high, in suites of various sizes, and so arranged that they can be shut off or thrown together to suit tenants.

There are to be four elevators placed near together running from the basement to the roof, the wells running up above the roof.

The building is to be heated by steam, and proper space must be provided for boilers, coal, etc. Besides proper provision for ventilating the halls, passages, etc., all the principal offices at least must be provided with open grates.

Ample provision must be made for public and private water closets, sinks, lavatories, coatrooms, and other closets, including bedrooms and closets for janitors and watchmen. No provision is needed for a janitor's family.

It is understood that tenants will furnish portable safes for daily use, and the floors and walls will be made strong enough to carry them. But besides this, many tenants will require considerable storage room for valuable papers, and large fireproof vaults must be provided. These may be grouped in each story, forming a continuous stack, or may be accommodated in the basement, like a "safe deposit vault," as may prove most expedient. In this case accommodation must be provided for outside depositors, with proper entrances, offices, etc.

The following drawings, and these only, will be furnished by each competitor. They will be accompanied by a brief memorandum, copied with a type-writing machine, explaining any points in the design not obvious from an inspection of the drawings:

Plans of the different stories, and of the basement.

Three elevations.

Two sections.

A perspective.

These will all be drawn to a uniform scale of 1-16 of an inch to the foot, and finished in line with India ink with the drawing-pen. They are to be back-lined, and no shadows are to be cast. There is to be no brush-work except in blacking in the windows and the sections of the walls and floors. The lettering and figuring is to be plain and simple, like ordinary printing type, and is to be confined to the names and dimensions of the rooms, written in the middle of each, without explanatory comments, which are to be put by themselves, as has been said in a separate memorandum.

If the plans of two stories are identical, one may be omitted; and if two of the stories are exactly symmetrical in plan, half only of either need be shown.

The perspective also is to be drawn in line only, without figures, background or foreground, and without shading, even in the windows; the building to be set at an angle of 45° with the plane of the picture—the vanishing points being set thirty inches apart, and the nearest point of the building, which is to be the southeast corner, set twelve inches from the right-hand vanishing point. The horizon is to be taken at the level of the principal floor. The scale of the perspective is to be one-third as large again as that of the elevations, on the nearest corner, or 1-12 of an inch to the foot.

These drawings are to be made each upon a half sheet of imperial paper (or upon a sheet of tracing paper, not tracing cloth, mounted upon imperial paper), the paper being cut down to the dimensions of 13 inches by 20 inches, and surrounded with a single line for a border. Each drawing, and also the accompanying memorandum, is to be distinguished by a motto or cipher, and no handwriting, of any sort, is to be put upon either. A sealed envelope bearing the same cipher or motto, is to contain the name and address of the writer, and he may inclose with it any information in regard to his training, experience or present professional position, and his qualifications for carrying out the designs necessary to the completion of the work, or for conducting the work itself, to a conclusion, or for both, which he may desire to bring to the notice of the committee. The architects specially invited by the committee will please distinguish their designs by putting a circle an inch or two in diameter upon the back of the drawings. Before making a final choice the committee and their professional adviser will open the envelopes containing the names of the authors of the most approved designs, in order that, other things having been first considered, purely business considerations may have their proper weight.

These drawings are not to be framed, glazed, or even mounted on cardboard, but are to be sent flat, in a portfolio, expressage paid, on or before June 15, 1886, to Professor William R. Ware, Columbia College, New York, N. Y., whom the Exchange Building Association have appointed to act with the committee as their professional adviser. He will employ a competent person to throw out from consideration all drawings or sets of drawings not made in conformity with these printed instructions. The remainder he will examine and will select those he finds to be the best among them, at least three in number, which he will hand over to the committee with his comments and recommendation.

The committee, in consultation with their professional adviser, will assume the entire labor, responsibility and expense of making estimates for the work on the basis of the designs selected by them, employing a competent surveyor to that end.

The committee will forthwith appoint one of the selected competitors as architect of the building, if they find that, in their judgment and that of their adviser they are warranted in doing so. But if, as may happen, they find themselves unable to choose, upon the evidence before them, between two or more of these candidates, they will invite the competitors among whom their choice then lies, to present, under the instructions of the committee, such further explanations as the nature of the questions at issue may require, and, if they find it necessary to do so, will institute a second competition among them, for which a sufficient time will be allowed. The committee will then, after consultation with their professional adviser, select one of the competitors so invited, to be the architect of the building, and will execute an agreement with him for the customary professional compensation, for such services, as declared by the Western Architects' Association, and by the American Institute of Architects.

The committee reserve the right, in case their choice falls upon an architect who was not in the first instance invited to enter this competition, and whose experience and professional position do not, in their judgment, warrant them in putting the practical conduct of the work into his hands or upon one who, by reason of distance, does not wish to undertake it, to associate with him some experienced person, to be nominated by him, upon whose competency in this respect they can rely, paying to each the customary fees for his share of the work.

Each of the architects invited to take part in this second competition, should such a competition be instituted, will receive from the committee a sum not exceeding \$400 as compensation in full for these additional services, whether he is or is not among the number of those who have been specially invited by the committee to take part in the original competition. But unsuccessful competitors not so invited will not receive any remuneration.

In the case of the successful competitor, these payments will be considered as payments on account of his commissions as architect of the building.

All drawings will be returned to the competitors as soon as the committee has made its selection; and they will not be shown to the other competitors, nor to the public, without the consent of their several authors, previously obtained in writing. Nor shall anything shown in any of the rejected designs, or otherwise suggested by the unsuccessful competitors, which is original as to this competition, be adopted and made use of in the building, without the consent of its author and proper remuneration being made him; the amount thereof to be agreed upon between him and the committee, and in case of disagreement to be referred to their professional adviser.

Any information which the committee, or any member of the committee, or their professional adviser may find proper to communicate to any of the competitors, in answer to questions or suggestions, will be made in print, and will be simultaneously communicated to all the rest. Such questions or suggestions must be made before the 15th of May, and should be addressed to one of the undersigned, who will communicate with each other before replying.

The final action of the committee, and the report to them of their professional adviser, will be communicated to all the competitors.

EDWARD H. ALLEN,
President of the Exchange Building Association,
Kansas City, Missouri.

WILLIAM R. WARE,
School of Mines, Columbia College,
New York, N. Y.

BULLETIN NO. 1.

Mr. George B. Post, of New York; Messrs. Peabody & Stearns, of St. Louis, and Messrs. Burnham & Root, Chicago, have accepted the special invitation of the committee; Mr. H. H. Richardson, of Brookline, and Mr. A. B. Cross, of Kansas City, have declined.

The committee have decided not to issue any further special invitations.

They have also voted to rescind the provision of their *instructions* which requires the specially invited competitors to distinguish their drawings by marking a circle upon them, desiring to make no discrimination between them and the others.

E. H. ALLEN,
W. R. WARE.

April 24, 1886.

BULLETIN NO. 2.

Owing to recent changes in the grades, the southwest corner of the lot is now nine feet higher than the southeast corner, instead of seven feet, as stated in the *Instructions*. The northwest corner is six feet lower than the southwest corner, and the northeast corner four feet lower than on the southeast, as before.

The sidewalks are twelve feet wide. There are no restrictions in regard to occupying space under the sidewalks, and no city regulations of any sort which it concerns the competitors to know.

It is left to the judgment of the competitors whether to bring the building up to the line of the sidewalks, or to set in back; and whether to put the heating apparatus in the basement itself, or in a sub-basement.

The small hall is for general purposes.

The telegraph offices are to be outside the large hall, but opening into it. It is the function of the inspector to inspect grain; his office will be one of the board's offices, and should be near the secretary's office.

The Exchange Building Association, and the Board of Trade, mentioned in the *Instructions*, are the same thing.

By *back-lining* is meant the same thing as *black-lining*, or *shade-lining*. No further bulletins will be issued.

EDWARD H. ALLEN,
WILLIAM R. WARE.

May 25, 1886.

EXPERT AND COMMITTEE REPORTS.

NOTE.

In view of a generally expressed desire on the part both of architects and of others, to see the drawings sent in the competition for the Kansas City Exchange, I shall be glad to receive from the several competitors permission to send them presently to Kansas City, to the care of the Kansas City Society of Architects, and later in the season to the New York Chapter of the American Institute of Architects, and elsewhere, if requested, at my discretion. But this would probably involve keeping them in hand until the middle or end of October.

If the several competitors will kindly send me a line giving or withholding this permission, I will either return the drawings at once, or retain them for this purpose, as I may in each instance be instructed. In the latter case I will take the liberty of adding to the motto or device by which each design is distinguished, the name of its author.

Except for the delay caused by this suggestion the drawings would have been returned a week ago.

A number of the competitors have done me the honor to ask me to give them my opinion of their work in some detail, and to explain in what respects it was not acceptable to the committee and myself. I hope they will not think it discourteous if I take this method of replying,

or if I say, that as it is impossible for me, with the time at my command, to comply with all these invitations, I beg them kindly to allow me to decline them all.

WILLIAM R. WARE.

New York, July 20, 1886.

COMMITTEE'S REPORT.

In fulfillment of the promise made in the printed *Instructions* issued to the competitors, we present for their information this account of the results of the Competition.

Fifty-three designs for the Exchange Building were sent in on the 15th of June. Of these, ten admitted light and air by means of several small areas or wells, twenty-five mainly by a large area at the back, six by a large area at the front, the building occupying three sides of an open court, and nine by a large court in the middle of the building which in two of the designs was covered by a skylight.

The large hall for the Board of Trade occupied in one design the basement, the first, second and third floors; in three, the first, second and third floors; in eighteen, the second and third floors; in seven the second, third and fourth floors; in two, the second, third, fourth and fifth floors; in one, the third and fourth floors; in twenty, the fourth and fifth floors, and in one, the fifth floor only.

In twenty-one, the large hall was in the middle of the front; in eighteen, at the end, upon a side street; in eight, it faced the front and side street; three were upon large courts in the rear; one upon the courtyard in the middle of the front, one extended the whole length of the front, and one was in the middle of the rear.

In thirty-one of these designs the safes were distributed in stacks throughout the building; in eleven, they were concentrated in the basement; in ten, they were shown in the basement and first floor, and in one, on the first floor.

The restaurant, in thirty-two designs, was placed in the basement; in eighteen, at the top of the building, and in three, upon the first floor.

In respect to style and external treatment sixteen were designed in some variety of Roman or Renaissance architecture, nine with a tolerably strict, and nine with a somewhat free use of Romanesque or round-arched mediæval motives, and not a single one in the pointed Gothic style, either modern or mediæval which, twenty years ago, or even ten years ago, was almost universal. There were seventeen designs, two or three of great merit, in which it was difficult to detect any special historical influence.

On opening the seals, it appeared that in two cases two sets of drawings came from the same hands, in another three, and in another four. The result serves, however, rather to commend the course of the successful competitors, who made numerous duplicate designs for their own use, as a means of study, submitting to the Committee only the one they believed to be the best.

The provisions of the printed instructions proved to have been carefully complied with in every case, except that in one design the building had windows on the north side, where the plan furnished showed a party wall, and one design showed a building of eight or nine stories, disguised as mezzanines, instead of five or six. These were accordingly thrown out of consideration at the start, as were also some drawings of details which accompanied another of the designs.

A list was then made of fourteen, which proved to have the best plans, and another of twenty-one, which had the most acceptable perspectives. Six designs were found upon both lists. To these sixteen more were added from those of such marked excellence, in either respect as to deserve further consideration. These sixteen drawings were then critically compared with reference to the provisions made for the general convenience of the public and of the Board of Trade, for lighting and natural ventilation, for office room and rental, and for a suitable architectural character and expression, and the memoranda that accompanied them carefully read. They were then arranged in series under each of these heads, and those that stood highest on the greatest number of lists were then further considered on their general merits. Five of these were finally selected to send to the Building Committee as being on the whole distinctly superior to the rest, for one reason or another.

In estimating the area of the small offices, floor space more than twenty-two feet from the windows was not counted, and in estimating their value, those upon outer walls were considered twice as good as those upon inclosed courts and areas.

This work, in which the professional adviser of the association was aided both in the clerical labor it involved, and in the more difficult task of criticism and judgment by a number of his friends—the value of whose assistance he hereby gratefully acknowledges—occupied just a week. He then opened all the envelopes and reviewed his action in the light of the information they furnished, but without finding reason to change his mind. On Thursday, the 24th of June, the five selected designs were sent to the Building Committee in Kansas City for their final judgment, with a written report, containing some comments upon the designs, but without any special recommendations. These reached the committee on Monday morning, June 28. This paper is printed below.

After diligent and almost continuous study, the committee, on Wednesday, June 30, came to a unanimous opinion. This they reported to the Exchange Building Association in the following terms:

"After a careful and detailed examination of these designs, your committee rejected two as unsatisfactory, because in one instance the office rooms intended for renting contained too much floor space to admit of a satisfactory rental from the building, and in the other instance, too large a floor space was given to ante-rooms of little or no rental value. Of the remaining three, no one of which was entirely satisfactory, though each one contained very decided advantages of one character or another, the committee finally rejected one because the large hall of the Board of Trade was without windows in the side walls, being lighted and ventilated through the ceiling, which your committee was persuaded could not be satisfactory to the users of the hall. Of the two then left, your committee finally selected the one marked 'UTILISSIMUS,' which was plainly the best of all for the lighting and ventilation of the offices, giving to the halls the best positions possible, and furnishing the largest number of offices for

rent in the best groupings for advantageous use, and on the whole, promising probably the largest returns of income, and admitting of the correction of all supposed defects with the least interference with the main features of the plan."

Upon being assured by their professional adviser, who had meantime been summoned from New York, that the alterations suggested could easily be made, and that the author of the plan in question was entirely deserving of their confidence, the committee formally voted to accept this design. The envelope containing the names of the five selected competitors being then opened, they found the selected design to be the work of Messrs. Burnham & Root, of Chicago, the other four, in the order of their preference by the committee, coming from Messrs. Edbrooke & Burnham, of Chicago; Messrs. Weston & Tuckerman, of New York; Mr. John L. Faxon, of Boston, and Mr. W. W. Clay, of Chicago.

Although only these five designs were submitted to the committee for consideration, all the perspectives were sent to them for their information, and to gratify a reasonable curiosity.

The committee took no steps toward determining the relative or absolute cost of the building shown, believing that this was largely within their own control, being determined by the special materials or methods of construction they might adopt. These points they could most profitably consider in consultation with the author of the selected plan.

The course of this competition has thrown some light upon several questions which, in discussions upon this subject, have been much debated. It has been questioned, for instance, whether it is desirable to have drawings made in perspective, the impression being a prevalent one that such drawings are likely to be misleading and deceptive, giving a much more favorable impression of a design than it deserves. However this may be with perspectives finished in water colors, the contrary seems to be conspicuously the case with drawings in line, such as were asked for in this instance. The perspectives have in this case served mainly to bring into prominence defects of design that were not noticeable in the elevations, only those designs that presented a plane surface, almost unbroken by recesses and projections, seeming to be secure against a very serious disparagement when thus presented. In other cases, the composition of wall and window, plain and decorated surfaces, which in elevation looked all right, would often, when put into perspective, fall into shapeless disorder. Such drawings seem, then, especially where the point of view is taken as near the building as in this case was necessary, rather to bring out the latent defects of a design than to invest it with fictitious merits.

It has been a matter of debate, also, whether the practice of concealing the identity of competitors under a fictitious name was of any value, the opinion obtaining that it was always easy to penetrate the disguise. The contrary has been the case, however, in this instance, the most confident convictions of half-a-dozen tolerably experienced architects having been ludicrously set at naught when the real authors of these designs became known. Only one or two correct guesses were made at all, and these took the form rather of surmise than of definite recognition.

This *incognito* has, moreover, proved to be of great practical convenience in judging the designs. Although, as was distinctly set forth in the paper of *Instructions*, the committee intended to be guided in their final choice by personal and other business considerations, as well as by the relative merit of the designs submitted, they were very glad in examining the five sets of designs that came before them, as their professional adviser had been in selecting these five, to keep the two questions apart, and to be able to discuss the drawings solely upon their merits, leaving other matters to be considered when their time came. It was felt that to have entertained both questions at once would have been greatly to complicate and embarrass the discussion.

Some light has also been thrown upon the vexed question whether the final choice among the competitors should lie with a building committee or with the experts whom they may bring into their counsels. It is certainly best that a committee should put the chief labors of examination and inspection into the hands of professional inspectors, if for no other reason than this, that in no other way can they so effectually inspire confidence and prove themselves to be above partisanship and intrigue, as by putting the exercise of favoritism out of their power. But it is not necessary to this end that they should have no voice in the selection, and questions may well arise, as in the case in hand, which demand for their solution an act of absolute and arbitrary choice which only the proprietors, or the committee representing them, are in a position to exercise. What relative importance to attach to rental, convenience and general architectural expression and character and what, on the whole, convenience will require, are not questions for a professional expert, but for his clients. In the present case, the professional adviser of the association was able to select five designs with a certain confidence that each was, on its own ground, superior to the remaining forty-eight. But the differences between these five were differences rather of kind than of degree, raising questions, as is shown in the committee's report to the Association, which only the owners could answer. It would have been impossible and improper, in this case at least, for any professional adviser to make their choice for them.

This competition has demonstrated, also, what there has been too much reason to doubt, that if proper regulations are made, it is possible to carry on such a contest and bring it to a conclusion without the exercise of any personal influence whatever on the part either of the judges or of the contestants. The committee and their adviser had, in this case, no knowledge or intimation of the authorship of any of the designs until after their judgment was formed. The competitors, also, with one or two insignificant exceptions, abstained absolutely from any attempts to exert any outside pressure upon them, and in these cases were signally discomfited.

The designs sent in have not been seen by the successful competitor nor by any persons except those mentioned above as having been specially invited to inspect them, and they will be forthwith returned to their owners, unless they otherwise direct.

EDWARD H. ALLEN.
WILLIAM R. WARE.

W. R. WARE'S REPORT.

Edward H. Allen, Esq., Chairman of the Building Committee of the Kansas City Exchange Building Association:

DEAR SIR,—In fulfillment of the task intrusted to me by the Exchange Building Association, I have examined the fifty-three designs for the Exchange Building which have been sent in to me, and herewith inclose to you, in accordance with the provisions of the printed instructions, those which I find to be the best among them, five in number, with the following comments:

These five designs are, in my judgment, distinctly to be preferred, for one reason or another, to any of the remaining forty-eight. Any one of them, if carried out substantially as shown in the sketches, would give the association an excellent and satisfactory building. This being so, it is for the committee to decide which, on the whole, best meets their wishes as promoting their own convenience, or as furnishing a good business investment, or as possessing a suitable architectural character.

I. The design designated by a *Corinthian Capital* offers the largest number of offices to be let for business purposes—one hundred and five in all, besides four railroad offices. Of these one hundred and five, eighty are upon external walls, and look into the streets, and twenty-five are lighted from an interior court. This court is, however, of exceptional size. The safes are concentrated in the basement, where the restaurant also is placed.

The large hall for the Board of Trade is on the second story, and is lighted entirely from the ceiling, being under the large court. This leaves the main part of the building for offices, which accounts for their exceptionally large number.

The exterior of the building is dignified and monumental, without affectations of any kind, and in general expression and character is entirely suited to the purpose for which it is designed.

II. The design marked *Utilissimus* is second in number of offices, having, besides eight railroad offices, ninety-eight smaller offices. All but six of these are upon external walls, and thirty of them are connected with secondary rooms in the rear. If these are counted separately, the total number of small offices is one hundred and fourteen.

In this design, besides the safes accumulated in the basement a considerable number are distributed through the building. The restaurant and most of the water closets are in the fifth story.

The large and small halls occupy the fourth and fifth floors in the northern wing of the building, and the offices connected with them the southern wing of the fourth floor.

Light and air are introduced into the interior of the building by a large court open to the street upon the south side. At the back of this court is an excellently designed tower; giving the building an effective and striking individuality. The rest of the design, however, seems to leave something to be desired in point of architectural character and expression.

III. The design marked with a *T-square and triangle* is the third in respect to the number of offices and the first in the amount of floor space given to them. Besides four large railroad offices, there are eighty-nine small offices, of which sixty are on external walls and twenty-seven on an area. Thirty-nine of these upon the outside walls are connected with twenty-three interior rooms. If these are counted as separate offices, the whole number amounts to one hundred and ten.

The restaurant is in the basement, and the safes are distributed in stacks through the building.

The large hall occupies the fourth and fifth stories at the east end, the offices attached to it, with the small hall, filling all the rest of the fourth story.

The exterior is treated in the Romanesque, or round-arched mediæval style now coming into vogue, and is, perhaps, more agreeable in itself and more suitable for a building of this kind than any of those designed in this manner. It is quite free from extravagance and eccentricity.

IV. The design marked *Anti-Cyclone* shows five railroad offices, all double, thirty-nine exterior offices, of which twenty are double, and seventeen on a court, of which twelve are double, making fifty in all. If the extra rooms are counted separately, the whole number amounts to eighty-eight.

A few safes are shown, distributed through the building. The rest are in the basement.

The large hall occupies the second, third and fourth stories at the west end, the offices attached to it and the small hall being in the second story.

The external aspect of this design, though not following the prescriptions of any special historical style, presents a simple and dignified architectural composition, eminently adapted to the important place this structure is meant to take among the public buildings of the city.

This is one of the few designs submitted which appears as well in perspective as in elevation. The tower with which it is adorned is unusually well composed, simple and elegant. It is to be noticed, also, that the two external courts on the rear, though not so wide as they well might be, not only give light and air to the rear offices and water closets, but serve to detach the building from the rest of the block, to the great advantage of its appearance—making it virtually an isolated structure.

V. The scheme marked with a *pair of compasses and a carpenter's square*, gives five railroad offices and sixty-one others, all single, of which forty-seven are exterior, nine on a small area, and five on an interior well.

The large hall is larger and higher than in most of the others, occupying the whole of the second, third and fourth floors in the eastern end of the building. The offices attached to it and the small hall occupy the rest of the second floor.

In many of the designs submitted, the large hall was planned in the middle of the front, either upon the second or third, or in the fourth or fifth stories. But none of the competitors who adopted this arrangement succeeded, in my judgment, in giving it a satisfactory architectural treatment.

Yours respectfully,
New York, June 24, 1886.

WILLIAM R. WARE.



Our Illustrations.

FIRST PREMIATED AND ACCEPTED DESIGN.

By Architects Burnham & Root, of Chicago, for the Kansas City Exchange building, placed in competition by them under the motto of "Utilissimus." *

This competitor began a study of the problem by laying out all plans he could devise as feasible for such a building and lot. Their value as to exterior light and air was then compared; and the one herewith submitted giving the best results, was therefore chosen.

It depends but little on interior courts, and opens well to the south, from whence comes most of the sunshine and the summer breezes.

The plan, therefore, suggests the motto, which latter represents the practical design, and is not intended to refer to the maker of it.

Following out this scheme of looking first and only to practical utility in the consideration of all main questions, the outside of the building is to be almost entirely of red brick and red semi-glazed terra-cotta.

First—Because these materials alone are fireproof.

Second—Because they are always bright and warm in their glowing monotone.

Third—Because they keep clean and do not grow dingy with age.

Fourth—Because, most especially, good effects are obtainable by these materials more cheaply than by any other known to your designer.

Some quality of dark brown sandstone is intended for the basement, but the faces of the piers, even here, between water tables, will still be simply red brick in order to prevent the piers giving way at this point under a fire, which would be extremely disastrous.

The use of the different stories is as directed by you, but the necessary height of the great trading-room, dictates an attic on the right wing. This is fortunate, as it gives ample space for the house and elevator tanks, their various connections, circulating pipes, etc. Also for ventilating machinery, and for rooms for the engineer and janitor. The tower is placed at the rear end of the great south court, where it will command the mass from the only available point of view one ever gets in our narrow city streets, namely, from directly in front of the building looking up this space.

A tower would be of little or no value on any street frontage, and, therefore, it was with gladness that your designers found they could avail themselves of the shape of the plan for this purpose. Late observations of this arrangement have satisfied us of its stately effect.

However, a tower may be dispensed with for economy's sake and a different and lower treatment devised in its place, which will fitly end the perspective at this point. Indeed, any tower will probably have to be left out of the actual building, in view of the small appropriation made for the same. But if it remains, such a position as designated would undoubtedly be the best place for it.

Please notice that the elevators are placed where most convenient for all three entrances and where the light is of least value for offices. Please note also, that each wing has a court up through it, illuminated in one case by skylights in the roof, and in the other by Hyatt lights in the floor of the great trading-hall.

The main entrance is domed with Hyatt lights. The water closets are principally located in the upper floors, where most approved by late experience in New York and Chicago.

Fireproof vaults are built up through as shown, because,

First—They are cheaper than any competent safety deposit made by itself would be.

Second—Because offices rent with them more readily than without.

Third—Because they add greatly to stability in the construction.

Finally—Because the building will be stronger, more economical and more remunerative with them than without.

The plan lends itself to these vaults perfectly. In several cases in the city in which your designer lives, it has been found by agents having charge of buildings that massed vaults, although in each story, are almost useless, and that the absence of regular vaults is a bar to renting in many cases, even when public vaults in each story are offered in lieu of them.

It is not deemed necessary to more minutely describe this design, as the author of it has full confidence in the professional adviser, and feels that under his investigation everything of value will be brought out without tediously calling his attention to the same herein.

Respectfully submitted,
UTILISSIMUS.

SECOND PREMIATED DESIGN.

By Architects Edbrooke & Burnham, Chicago. Descriptive of the proposed Kansas City Exchange building, in accordance with designs presented under the motto of "Anti-Cyclone" and agreeable to printed instructions.

The accompanying designs contemplate a building, five stories in height, with basement and sub cellar.

The size upon the ground proper at basement lines will be 171 by 105 feet, leaving two open courts, each about 15 by 63 feet, to provide light and air for all the back offices, rooms, water-closets, lavatories and boiler department.

The central transverse corridor portion of the building, as shown on all floors, will extend back to the back line of the lot, affording ample, convenient and a retired space on each floor for public lavatories, water closet, rooms, etc., also department for steam boilers, pumps, etc., and if desired will give a corridor connecting this with the adjoining building.

The elevator and house tanks will be located in the top or sixth story of this stack; the elevator cylinders, traveling sheaves and cables will also be located within this space, and generally it will be a point of concentration of the entire water, steam and machinery works of the building.

The sub-cellar will extend under the entire building, and will accommodate steam piping, indirect radiators, storage of fuel, etc., and check moisture from rising to the basement floors.

* These Architects were also among the three paid competitors.

The basements are elevated well out of the ground, thereby securing convenient, light and desirable offices, without unsightly areas to light same.

Owing to the grade of the sidewalks on the three fronts, it was thought advisable—grades vary 11 feet from the highest to the lowest points—to enter the basement level with the sidewalk at the main south entrance, and continue the main transverse corridor floor and entire west half of the basement floor at same level with the floor of this the south entrance, this part of basement being 10 feet high in clear, and the floor of the entire east half dropped 4 feet lower than west half, making the east half 14 feet high in clear, and the floor of same a little above sidewalk at the entrance on Wyandott street, rendering the basements convenient and accessible from sidewalks on all sides, and the ascent to the principal floors being by inside steps, stairs and the elevators in preference to climbing long, outside steps, which would destroy a good entrance to either basement or principal floor.

There will be an attic or sixth-story occupying the entire transverse corridor portion from the tower back to back line of lot, including the space where tanks will rest over the water-closet department.

The elevators and main stairs will extend from basement to attic story, giving the public access to the tower and observatory, and providing, in addition, janitor's rooms, etc.

The two elevators adjacent to the main hall will open directly into the main hall, and one of same will open into the restaurant store-room on fifth floor.

The height of stories are shown as follows, namely:

Basement, as before stated.....	14 and 10 feet.
Principal story.....	18 feet.
Second story.....	10 "
Third story.....	10 "
Fourth story.....	10 "
Fifth story.....	10 "
Sixth story or attic.....	12 to 14 feet.

Main hall will extend through second, third and fourth stories, and will be about 33 feet in height, and will have two balconies.

The small hall will extend through the second and third stories, and will be about 21 feet 6 inches in height, and will have a graded floor. Restaurant 14 feet high.

The entire building is intended to be fireproof, and the exterior constructed of stone, brick and terra-cotta.

The floor of restaurant department on fifth floor, which also forms the ceiling of main hall, will be suspended by wrought-iron trusses placed in the main roof.

It was thought preferable to place the restaurant on the fifth floor, occupying a space of less rental value for office purposes, as well as being more pleasant and retired, and also to avoid the fumes of the kitchen extending through the entire building.

It will be readily seen by the plans that all of the rooms, offices and corridors in the basement, and upon all floors above, will be provided with an abundance of light and air, and, as far as practicable, with open grates.

The interior of the building above the principal floor will be carried on iron columns and girders as far as practicable, and divided by hollow tile partitions, so that any change in the divisions or size of rooms may be made at any time without injury to or molesting the strength and permanency of the building.

The main and small hall, restaurant, kitchen, etc., will have a thorough system of ventilation, the air being exhausted through the large vent stacks, and the smaller rooms and offices ventilated by open grates. The system of warming will be by steam, direct and indirect.

The tower will rise 165 feet in height above the sidewalk to the floor of the lookout.

The reasons for adopting the style of architecture shown by the design, and a comparatively flat roof, was to secure a massive and substantial effect, and in keeping with the uses of the building, and of the most lasting and durable character of construction and of moderate cost; with the low-roof method, the skylights are lower down and nearer to the parts to be lighted.

And as to the location of the main and smaller halls on the second floor, there is no doubt that the lower down the better for that important department, and if it were not for the necessity of having banking and other offices on the principal floor, that floor would be even more preferable for its location, as it is undoubtedly desirable to reach that department in haste, and oftentimes a preference will be shown to the stairs rather than wait for an elevator.

In the interior construction the bearings and supports are direct, the construction simple and economical in cost; the stairs and elevators centrally located, and all of the rooms and offices convenient and accessible from main corridors, and one connected with the other.

The main hall is placed in the southwest corner of the building, as this is the coolest location in summer and the warmest in winter; still, it could be located elsewhere if desired.

The drawings submitted consist as follows, namely:

Basement floor plan, principal floor plan, second floor plan, third floor plan, fourth floor plan, fifth floor plan, south, east and west elevations, transverse and longitudinal sections, and perspective.

All of which are most respectively submitted.

"ANTI-CYCLONE."

THIRD PREMIATED DESIGN.

By Architects Weston & Tuckerman, New York City, for Kansas City Exchange Building, submitted in competition under the device of a Corinthian capital.

The arrangement of the plan in a manner to obtain the best results in accessibility, lighting and ventilation appears to be sufficiently obvious in the drawings to dispense with explanatory comments.

The convenience and the easy approach to the Board of Trade Exchange, and the generous allotment of space to the two banks, which

are required to be in the first floor, were assumed to be of first consequence. The greatest available number of rentable offices of all grades was then obtained.

Corridors are on interior and direct lines, and offices reached by shortest distances from elevators and staircases.

All offices have direct light. All lavatories have direct communication with outside air.

Columns and girders have been introduced only where unavoidable. Lines of interior walls are arranged to give as nearly as possible uniform lengths of floor beams and evenly distributed weights throughout on all bearings. Grand staircase is of stone; side and basement staircases of iron. Roof of decks pitching inward to court to connect with drainage at Wyandotte street main sewer.

FOURTH PREMIATED DESIGN.

By Architect John L. Faxon, Boston, for Kansas City Exchange Building, submitted in competition under mark of "a pair of compasses and a carpenter's square."

Facades.—To be built, preferably, of dark Croton front bricks and trimmed with brownstone—in the quarry face, molded and carved, the carvings representing the flora and products of the state; the tablet under third story windows bearing the name of association, date of year, and the seal of the association at the right. The dormers, other than of masonry, and conductors to be of copper.

The roofs to be framed with iron and laid with terra-cotta tiles or red slate; the decks to be of copper.

The entrance loggias on Eighth street to be a marked and ornate feature of the building; to be open, with the exception of the outer arches being inclosed by gates of bronze, bearing in the center the monogram and seal of the association; the columns, flights of steps ascending and descending, and directory tablets to be of polished marble; the capitals, interior wall-facings and intersecting arches to be of light buff Ohio stone, with elaborate carvings. The ceiling to be framed and paneled with heavy beams and deep coffers in red-oak, carved; the entrance doors to be of the same, with small, carved panels, and hung with ornamental hinges of bronze.

The tympanum of the arches to be filled with allegorical carvings representing commerce, finance, agriculture, steam (railroading and navigation), art and manufacture; the flooring to be of marble.

The lintels covering first floor, the mullions and transoms, and grills to safety deposit windows to be of iron of ornamental design.

The windows to be glazed with plate glass.

All thick partitions to be of brick, others of fireproof blocks.

The floors to be constructed of iron beams and terra-cotta arches.

The rotunda, galleries, grand staircases and framing to elevator wells to be of iron, with ornate guards and balustrades; the flooring and treads of marble.

The structure over Board of Trade hall to be carried on box girders of iron running across the hall, and trussed iron girders running the length of the hall.

All interior columns to be either of iron or stone, those within the rotundas being of polished granite.

Plastering.—To be three-coat work, directly on the walls or on wire lathing throughout; cornices, beads, ornaments and wainscoting, other than marble, in plaster of Paris and Keen's cement.

Marble or tile flooring to be laid in all halls, corridors, vestibules, restaurant, safety deposit, railroad offices, toilet rooms, banks, Board of Trade hall, small hall, reading-room and inspector's office; maple, birch, or hard pine flooring to be laid in all other offices.

The wainscoting to all vestibules, halls, corridors, in basement, first, second and third stories, in the rotunda, grand staircase, banks, board of trade hall, small hall, reading-room and toilet rooms to be of marble; in all other offices, halls and corridors of Keen's cement.

Standing Finish.—To be of quartered oak throughout, doors hung with bronze-metal trimmings of special design.

All vaults to be constructed in the most approved fire and burglar-proof manner; the partitions in safety deposit, separating vaults from public, to have an ornate grill of iron from floor to ceiling, socketed into iron beams, partly filled with opaque glass; storage vaults being in the sub-cellar, access being had to them by the steps shown and by sidewalk elevators with burglar-proof doors set within foundation walls.

Toilet Rooms.—Plumbing to be first-class in every respect, and all standing finish either of marble or tile; seats only of wood, cherry.

Fireplaces.—To be lined with brick, soapstone or iron; mantels to be of oak, excepting those in apartments wainscoted with marble, where they are to be of marble corresponding with wainscoting; those in the Board of Trade hall, small hall and reading-room to be of marble from floor to ceiling, elaborately carved in flora, egg and dart acanthus.

Heating.—To be by tubular boilers; the boiler-acanther being in sub-cellar, under northeast corner on Wyandotte street, the coal vaults being under sidewalk.

The heating generally is to be by direct radiation, with cold air supply at the radiators.

The heating of Board of Trade hall to be by indirect radiators, radiators stacked in sub-cellar with cold-air supply from area in rear; the heated air passing to the hall by ducts in the walls, and discharging into hall halfway between floor and ceiling. The foul air to be drawn out by fan in sub-cellar through ducts in the walls and gratings in the wainscoting of hall, and discharged out into areas in sidewalk, shown with gratings on basement plan.

The architect has employed this system in halls, and knows by experience that it is the only sure and satisfactory system.

The entire building to be piped for gas and wired for electric lighting; the rotundas to be lighted by electroliters on the four corner pedestals to the gallery balustrades, by wall brackets and by brackets from the frieze to the wells corresponding with floor line of the galleries, and a circle of lights below the lantern windows. Bells and tubes to all offices.

Thirty thousand dollars to be allowed for painters' and decorators' work, \$15,000 being used for decorations of rotunda, Board of Trade hall, small hall and reading-room.

The postoffice to be fitted with United States lock boxes, and the "Cutler Mailing System" placed in the rotunda.

The building to be first class in every respect, thorough and substantial in construction, in accordance with the best building laws of the country, and under the immediate supervision of the architect and his assistant, and no expense will be spared in the office that every detail of construction, architecture or decoration shall be worked out, to the end that the building may be a marked example of purity of style in its entirety.

Association Notes.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS.

Meeting of August 5, 1886. President Burnham in the chair.

The chair having called the meeting to order, Acting Secretary Stiles read the minutes of the previous meeting, which were accepted.

The President: Has the Committee on Party Walls made preparation to report at this meeting?

Mr. W. W. Boyington: I am convinced that it will require more than one, perhaps two, good, long sessions of the committee to make a report. On behalf of the committee I therefore suggest that you either excuse us for the time being, or give us time to make a report at some future meeting.

The President: What we want to know particularly is what the architect's responsibility is, and if the committee can get those leading, sharp questions that come straight to us answered at the time of the meeting in September, it would be of great value to us. I did not suppose that the committee was going to make up a history of party walls, but I did suppose they would make a report in regard to these vital questions that come before us all the time. For instance, the owner says to me: "I want you to do so and so in that wall." There is no party-wall contract, but he says: "I will take the responsibility." I want to know in case he should fail financially whether it would come back on me, and whether he could simply step in and say, "My architect did so and so, and it is his fault." Now, that sort of a question, I think, ought to be answered.

The committee was given till the September meeting to make their report.

The President: What is the status of the committee on the sanitary bill?

Mr. Baumann: We hope to be able to report at the next meeting the outline of a plan to be pursued.

The President: The chair would suggest that the secretary call upon the committee having in charge the state bill, and mention the matter once a week, from now to the time of the next meeting, and upon the Committee on Party Walls the same.

Are any measures being taken looking to the entertainment of the Western Association at its convention next November? If not, I would suggest that some gentleman present make a motion appointing a committee to take that matter up. We ought to do all in our power to make the proper arrangements.

Mr. Treat: I move that the chair appoint a committee of three to confer with a committee of the same number of the Western Association to take steps for the entertainment of that Association here Wednesday, November 17 next.

Motion carried.

The President: The chair will appoint Mr. Treat (chairman), Mr. Holabird and Mr. L. H. Sullivan. The chair expresses the opinion of the association, no doubt, and hopes the committee will find a way to make these gentlemen feel that this visit to Chicago will be the most delightful yet experienced.

The motion is made that the committee be allowed to appoint sub-committees to assist them, and that the election by that committee will obligate the said sub-committees to serve.

Carried.

Adjourned.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting on the 19th ult. was largely given up to the reading and discussion of an excellent and well condensed and arranged paper upon the history of Greek and Roman architecture, presented by C. A. Kessell. In the discussion a general sentiment in favor of Greek forms in the line of ornamentation was expressed, but the difference in taste and custom had destroyed the practical worth of Greek modes of construction. Members thought that the reason modern people failed to see exceeding beauty in exact copies of the Greek temple when erected was because of the unharmonious surroundings and the education of a different taste. Mr. Beaumont voiced the sentiment of the club in words complimentary to Mr. Kessell, for the interesting way in which he grouped the different facts and their judicious selection.

It was announced that the library competition would close on the 2d of August, and the country shop front and the fountain competitions would close on the 16th of August.

The time for drawings to be sent to the office of THE INLAND ARCHITECT for the Minneapolis art and industrial exposition was extended to the 10th of August.

MR. GEORGE HASKINS, the interior decorator and furnisher, is completing entire a number of private residences outside of Chicago, among which are the following: For Mr. S. E. Atkinson, banker, Helena, Mont.; Colonel A. S. Johnson, land commissioner Santa Fé Railway, Topeka, Kas.; Mr. Jonathan Thomas, lumberman, Topeka, Kas.; Mr. George M. Noble, banker, Topeka, Kas. (the last three houses designed by F. W. Stickney, architect, Boston); residence for Mr. D. L. Wing, president Chicago & St. Louis Railroad, Springfield, Ill.; and for Mr. George F. Kirby, Marshalltown, Iowa. Mr. Haskins is just finishing the beautiful residence of Mr. George P. Braun, La Salle avenue, and will shortly commence a fine residence in Cleveland, Ohio.

Mosaics.

THE CUTLER MANUFACTURING Co. have lately given Mr. Richard Robins, in this city, the agency for their letter-chute for office buildings.

AN exhibit of building materials has been opened at Cleveland, Ohio, which has already met with considerable success. Frank Houghton is secretary, and can be addressed for particulars.

THE partnership heretofore existing between C. P. Thomas and John Rodger, under the name of Thomas & Rodger, architects, is dissolved, and the business will be carried on as usual at the office of C. P. Thomas, in the Equitable Building.

THE New York Architectural Terra-Cotta Company's works at Hunter's Point, Long Island, described in our July issue, were destroyed by fire July 18. These very complete and extensive works will be immediately rebuilt, and as the kilns and a great deal of the machinery was not injured, orders will be but little, if any, delayed. The loss was about \$100,000; covered by insurance.

THE GEORGIA MARBLE Co. have removed their Chicago office to 103 Dearborn street, corner Washington, where they have a large display of the various marbles quarried at their works at Tate, Ga. The officers of the company are H. C. Clement, president; Oscar F. Bane, secretary and treasurer; Frank H. Siddall, vice-president, and J. A. Dewar, general manager. The Chicago branch is under the management of Mr. Geo. H. Glazier.

MR. H. C. BLUM, traveling agent for the Mankey Decorative Company of Williamsport, Pa., called at our office with a fine line of machine-carved samples of wood for interior finish. Intricate geometrical and perforated designs of desirable widths and lengths are kept in stock. Designs furnished by architects are made to the most complete detail. Messrs. Lord & Eiker, Room 24, old Chamber of Commerce Building, are agents for Chicago and vicinity. They also report satisfactory progress in the improvements at Mount Hope Cemetery, for which they are furnishing Salem Stone, and in the Granite Church at Thirty-third street and South Park avenue, for which they are furnishing the Fox Hill Granite, also several other buildings which are using either Salem Stone or Fox Hill Granite in their construction.

THE Babcock & Wilcox Co., of New York, have lately placed boilers with the following parties: Brooklyn Bridge (2d order), 208 H. P.; Westerly, R. I., Water Works, 90 H. P.; Lehigh Coal & Navigation Co., Penn., 208 H. P.; Edison Lamp Co., Newark, N. J. (2d order), 104 H. P.; Excelsior Needle Co., Torrington, Conn., 61 H. P.; Huguenot Mills, Greenville, S. C. (2d order), 50 H. P.; Welham Plantation, Louisiana, 240 H. P.; Marks Bros., Philadelphia (2d order), 45 H. P.; Bird Coleman Furnaces, Cornwall, Pa. (2d order), 960 H. P.; Columbus Steel Co., Columbus, O., 480 H. P.; Benedict & Burnham Mfg. Co., Waterbury, Conn. (2d order), 156 H. P.; Cardenas Refinery, Cardenas, Cuba (3d order), 208 H. P.; Mt. Houmas Plantation, Louisiana, 240 H. P.; Southwood Plantation, Louisiana, 272 H. P.; Dakota Apartment House, N. Y. City (3d order), 240 H. P.; Edison Lamp Co., Newark, N. J. (3d order), 104 H. P.

ARCHITECTS and builders, who deem it necessary to keep up with the march of events, should give full consideration to the growing art of sheet metal construction. There is certainly ten times more sheet metal used in building now than ten years ago, and its uses are only fairly initiated, many new ones being devised yearly, prominent among which we mention fireproof corrugated iron arches for ceilings; tastefully painted, small-sized corrugations for interior decorations of public halls, theaters, offices and stores, and also for various other uses adapted for particular cases only; these in addition to the well known and practically tested use of iron for roofing and siding. We have the "Wire Age;" may there not be a sheet metal cycle? Perhaps the greatest single cause of the rapid increase in these uses of sheet metal has been the ably directed energy of the always advancing and reliable Cincinnati Corrugating Co., of Cincinnati, Ohio, whose "literature" is recommended to the perusal of all interested in building.

THE largest majority of health or pleasure-seeking tourists that have not the requisite wealth and time to visit the mountain resorts of Colorado, or the various water resorts of Northern Wisconsin and Minnesota, long for a resort that will combine the benefits of easy access, pure air and enough natural attraction to entertain and invigorate the spirit. Oregon, Ogle County, Illinois, possesses the combination in the greatest degree; on the Burlington Route, but 99 miles from Chicago, and reached from that point twice per day in less than four hours, with good and ample hostleries; numbers of springs gushing forth pure and health-giving water; the beautiful Rock river; towering hills and massive rocks, one can well imagine that all the popular and interesting resorts of the continent have been merged together to be enjoyed at this delightful place. Detailed information furnished upon application to PERCEVAL LOWELL, General Passenger Agent, C. & Q. R. R., Chicago, or M. L. ETtinger, General Ticket Agent, C. & I. R. R., Rochelle, Ill.

THE new state house of Indiana is rapidly approaching completion. July 13 the statuary for one front was put in position. Near the top are four groups. That on the west end is composed of four figures, an Indian chief, a squaw with a papoose on her back, and a young boy. Next to it are the representatives of the industries of the state, a sturdy blacksmith surrounded by the appliances of his trade, a farmer with sickle and sheaf of oats at his feet. On the east extreme is the pioneer group, a father, mother and son, dressed in the habiliments of the early settlers of the state, and surrounded by the rude implements of those days—an old flint-lock rifle, etc. All these figures are of heroic size, so that from the street they appear to be of ordinary life size. The designs are strikingly appropriate and picturesque, and the work of the sculptor has been faithfully and

artistically done. Surmounting all these on an elevation at the extreme top of the wall is a large American eagle, eleven feet from tip to tip, cut out of stone and apparently screaming for liberty.

THE QUALITY OF TIN PLATES AGAIN.—In some editorial comments on the necessity of a reform in the manner of designating the value of roofing plates, which we addressed to architects and builders some months ago, we called special attention to the fact that the common method of specifying the quality of tin plate by box and brand afforded the purchaser no protection whatever against the dealer who might be disposed to fraudulently furnish light plates; and we called special attention to the fact that the only way by which to be assured that he is really getting the best plate for the money, is for the architect or builder to draw his specification so as to require the designation not only of the brand, but also of the weight of the plates to be furnished. In no other way will it be possible for the intending purchaser to know which of several bids is the lowest, material and coating being assumed to be the same. We published at that time, also, a circular-letter addressed to architects and builders by the well-known house of Merchant & Co., of Philadelphia, in which they declared that they had decided upon introducing this much-needed reform, by stamping each of their "Gilbertson's Old Method" plates not only with the name of the brand, but also with its thickness. Their circular also advises architects to specify plates stamped not only with the name of the brand, but also with the thickness, 1C or IX, thus completely insuring that the specification will be properly carried out.—*The Manufacturer and Builder* (New York, July, 1886).

THE costly nature of a tin roof and the trouble, expense and damage likely to result in the employment of poor tin in its construction, lead us to call special attention to the necessity both on the part of the roofer, as well as the architect, builder or property owner for whom he is working, to secure the use of a thoroughly reliable tin plate. Messrs. N. G. Taylor Co., established in Philadelphia in 1810, have for ten years past been engaged in the importation specially for roofing purposes, of genuine "old style," hand dipped terne plate, which is of superior quality in sheet and coating. As the durability of a tin roof lies entirely in its non-corrosive coating, it can be readily seen how a tin plate in which the deficiency in coating is made up by the extra weight of iron, falls far behind the genuine "old style" tin plate. Besides this, it is evenly dipped, every plate is cut perfectly square, and every box packed is carefully assorted so that no defective sheets shall be sent out; all advantages that appeal to the roofer as well as to the architect, builder and property owner. Every sheet of the genuine "old style" tin plate sent out is stamped in one corner with the name, "old style," the trade mark, an arrow and target, and the name of the importers, and even after the roof has been painted this is dimly visible on the sheets. Purchasers can thus defend themselves against fraud, and by calling for the "old style" brand of terne plate in specifications and contracts, they will secure the best roof the manufacture affords. Various imitations of this famous tin are in the market from time to time, but the original importers, Messrs. N. G. Taylor Co., Philadelphia, always carry a supply on hand sufficient to meet all requirements, and will execute orders sent to them direct from their stores. Particulars as to prices and discounts being forwarded to dealers or roofers in any part of the country.—*New York Commercial World*.

THE necessity of establishing branches in Chicago for the purpose of meeting the demands of their extensive and growing western trade has been fully recognized by many of the leading eastern houses. The latest and most notable acquisition in this regard is the establishment of a branch house in Chicago by the well-known firm of Henry Huber & Company, of New York, manufacturers of specialties in sanitary and plumbing goods. They have taken the spacious premises, No. 82 Dearborn street, for that purpose. Mr. John L. Martin, a gentleman of large experience in the business, has been appointed as the local manager. Under his direction the place has been fitted up to meet all the requirements of the business, and to exhibit in actual working order the various lines of sanitary goods manufactured by Henry Huber & Company. Such judgment and good taste have been displayed in carrying out the work that the establishment will be one of the finest of the kind in the West. The front of the building is finished in peacock blue and gold, and presents an attractive and striking appearance. The floor is laid in Italian marble in diamonds of black and white. The walls will be finished in letter paper, the design being fine bronze background with a set buff figure. The dados, also of letter paper, are six feet high, being a beautiful design in blue and gold, and are surmounted by black walnut chair rail. The ceiling is also in letter paper, being what is known as the Morrison design, and presents a fine combination of colors in bronze, terra-cotta, and pale blue. The cornice is of papier mache in relief work of gold, with copper bronze molding. The center pieces are also finished in beautiful designs in papier mache to match the ceiling decoration. From these center pieces are suspended three chandeliers of rich design in antique brass. The side of the window recess is finished in lincrusta walton, and the window platforms are of Italian marble. The windows are of French plate-glass in single lights. The north wall of this elaborate showroom is finished in white marble to the height of eight feet. Along this wall are displayed in permanent position and in full working order, eighteen different styles of water-closets manufactured by Henry Huber & Company. These rest on a marble platform thirteen inches high, and over each is placed a water tank in black polished walnut. Near the entrance, and on the same side of the room is erected a three-fold wash basin, resting on marble base or platform and topped with marble slab, supported by three miniature pillows finished in nickelplate. These basins are known as Boyle's patent new departure valve basins. There are many other details worthy of mention, both in reference to the establishment and the goods exhibited which cannot be made in a brief notice. It is sufficient to say that it will be one of the most elegantly fitted up establishments of the kind to be found in this country either east or west, and will be a credit to the enterprising firm of Henry Huber & Company. A visit to it for personal inspection by architects and all others interested in sanitation, will be profitable to them.

An Interesting Visit.

BY ARCHITECT E. H. KETCHAM.

FINDING myself in New York, with a vacation upon my hands, and without having in view any definite objective point at which to spend it, I boarded one of the morning trains of the N. Y., N. H. & H. R. R. at the Grand Central depot, thinking that a few days might perhaps be spent pleasantly in visiting some of the old, and, to a Westerner, always interesting New England towns, where so many of our successful men received their early training, and from whom I had heard so much of the charms of their "down-east" homes.

The train, being an express, did not stop until it reached Stamford, when I was aroused from a pleasant day-dream by the voice of the train-boy calling, "Stamford, Stamford; twenty minutes for refreshments."

"Stamford"—the name sounded familiar. How did it become so? Being in need of no refreshment, except so far as my memory was concerned, I devoted my time to the solution of this question, for the lack of a more important subject of thought.

Hearing my name called, I turned, and was greeted with a very hearty hand-shake from a fellow Chicaguan, whose presence at once brought to my mind the answer to my recent mental inquiry, the gentleman referred to being Mr. Wm. F. Donovan, the western manager of The Yale & Towne Manufacturing Company, the name of the company suggesting its usual accompaniment, Stamford, Connecticut.

Accepting Mr. Donovan's courteous invitation to visit the works of the company, which are located within a short distance of the station, we soon reached them.

Covering several acres of ground, the buildings are constructed entirely of brick, and are exclusively devoted to the company's business. The general offices, drafting room, etc., are located in the front corner building, which is fireproof. The other buildings include the brass and iron foundries, forges, chain shop, pattern and wood-working shop, machine shops, and shops for the manufacture of locks and hardware.

Upon entering the office, I was much impressed with its combination of attractiveness and convenience, the large main office being occupied by a large clerical force, while a number of smaller rooms are provided for the executive officers, where they can secure freedom from interruption.

The room of the president, Mr. Henry R. Towne, is a spacious and handsome apartment, containing a fine library of technical works, relating mostly to engineering, in which profession he is eminent. During my conversation with him, he referred with apparent pleasure to his recent visit to Chicago, where he presided at the spring meeting of the American Society of Mechanical Engineers, and to the generous hospitality shown to the eastern members who attended the meeting.

Under the guidance of Mr. Schuyler Merritt, the general manager of the company, I was shown the various departments of its immense business, the diversity and character of which requires a varied and exact knowledge, and a high degree of executive ability in its management, as will be evident from the following brief description.

After leaving the office, our first visit was to the testing machine department, where the famous Emery testing machines are built, and for which the inventor, Mr. Albert H. Emery, received from the American Academy of Arts and Sciences their "grand medal of honor" for the invention of the century "most conducive to human welfare," and received also the encomium of the highest engineering authorities throughout the world. After witnessing the marvelous delicacy and accuracy with which the seventy-five-ton testing machine, in the company's physical laboratory, performs its operations, and listening to a brief description of its construction, we proceeded to the crane-shop, where all kinds of hoisting machines are built, from the large, power, traveling cranes, for raising and transporting locomotives, to the light warehouse crane of one thousand pounds capacity. This shop is provided with every modern convenience and labor-saving device known to the mechanical world, as, indeed, are all the various departments which were visited.

In the bays, at either side, are located the heavy machine tools, while the intervening space of fifty feet is spanned by two large traveling cranes, with which loads of twenty-five tons are lifted and carried from one end of the building, three hundred feet in length, to the other, each crane being managed by a single operator, who stands upon a platform attached to the end of the cranes, and which travels with them, the various motions being imparted to the cranes by the movement of suitable levers. Power is transmitted to the cranes from a fixed shaft at one end of the building by means of a cotton rope.

From the crane shop, we proceeded to the chain and pulley-block shop, where the well-known Weston Differential hoist-blocks are made, as well as the chain for the various types of hoisting machines manufactured by the company. The rapid motions and skillful manipulation given to the iron by the chain-makers is a most interesting sight. No chain-making machines are used by the company, as there has not yet been a chain machine invented the product of which will stand the thorough tests which the company consider necessary before it can go upon the market with its guaranty.

The next places to be visited were the iron and brass foundries. In one department of the former the heavy crane castings are made, while in the other the small and delicate lock castings are produced. In the brass foundry, the castings for the internal parts of locks, the lock fronts, the small cabinet locks, and the time and dial locks, and the castings for door and window trimmings, as well as the metallic postoffice lock-box frames and doors, are made.

Leaving the foundries, we passed into the postoffice shop, where post-office equipments of all kinds are constructed, from the little "fourth-class" cabinet, for use on the counter of a small country store, to the large equipment for government buildings. This shop is provided with wood-working machines of all descriptions, and with large erecting floors, upon which the complete postoffices are placed in position. In order to build a postoffice equipment, the company requires to know only the dimensions of the room

in which it is to be placed, and the probable number of boxes required. When the outfit reaches its destination, it can be placed in position within a few hours, however large it may be, and the postoffice opened for business. The work is shipped in sections, and requires no skill to erect it.

The time-lock and dial lock departments, came next in order, and after a brief examination of the various machines, their operation, and of the finished product, we proceeded to the shop where the door-locks, cabinet locks and hardware are made.

Your space will not permit of a general description of these, though such a description would, I am sure, exceedingly interest your readers. The admirable arrangement of the room, the expensive and intricate machinery and special tools, the many and varied processes through which each part of the lock passes before it reaches the assembling-room, and finally the inspecting-room; the large and interesting department of galvanoplasty manipulation, the pattern shop, and the thousand and one other things of interest, would occupy an entire issue of your paper without exhausting the subject.

Passing from these departments to the drafting-room, the system employed there was explained, and of which I took careful notes, and will make it the basis of another article in the near future, as it is the most complete and desirable system that I have ever seen, and will, I believe, be interesting to your architectural readers.

Upon visiting the stock and sample rooms, which came next in order, I was shown the extraordinary variety of work turned out by this company in its finished state. Most of your readers are familiar with some of this work in the form of "Yale Locks" and fine hardware, but to get anything like a complete idea of its variety and attractiveness, it is necessary to go through the experience which I am now relating. Boxes were uncovered, goods were unpacked, caps were taken off from the locks, and their internal mechanism explained, the thoroughness of the workmanship, the excellence of the designs, and their attractiveness fully displayed. Many of the designs are special, and are not shown in the company's catalogue, the company doing a large business in special work, the designs being furnished either by it or by outside designers and architects, the most of which, by special agreement, are never duplicated.

In discussing the general subject of locks and hardware with the gentlemen who accompanied me, after having congratulated them upon the prosperity and success which they had attained, they stated that they attributed it largely to the fact that they had always refused to comply with the demand for cheap, and, as a consequence, low-grade goods, preferring the steady progress, which they knew was to be obtained by turning out only first-class work, to the methods of those manufacturers whose only argument is the lowness of their prices, and believing also that a high reputation is more to be desired than immediate profit.

The subject of good hardware is one to which, until recently, very little attention has been given by those who have occasion to use it. This is particularly true of architects and house owners. Specifications have usually been written with some general phrase, such as "hardware to be of good quality." Under these conditions it has always been to the contractor's interest to furnish just as cheap goods as he thought would pass, and the result has been a constant pressure on dealers, and through them on manufacturers, for low prices. Most manufacturers have responded to this appeal by a steady deterioration in the quality of their work, until about the lowest depth in this direction has been reached.

"Yale Locks" and "Yale Hardware" are sold at prices which afford but a very reasonable profit to the manufacturers, although it is frequently the case that dealers, from interested motives, are disposed to represent that the prices of "Yale" work are very much higher in proportion to those of other manufacturers than they are in reality.

The truth is, that where other manufacturers attempt to approximate the excellence of "Yale" work, their prices are quite as high, and, in some cases, much higher than those of the Yale & Towne Company.

This company has never been content with achieved excellence, but has constantly endeavored, by experiment and improved methods, to improve its product in every way; that being its prime object, and the question of price being a later consideration. The most important result of this policy has been the invention of the corrugated key, which consists of the original plate key, altered simply by having its blade, or the portion which enters the lock, corrugated in longitudinal lines. The keyhole has a sinuous cross section conforming to that of the key, and it extends the entire length of the plug of the lock. When, therefore, the key is inserted in its place, it is supported throughout its entire length. But the most important result of the shape of this keyhole is that the picking of the lock is rendered very difficult, because a picking tool cannot even be inserted in the lock except with great difficulty. It is hazardous to assert that any key-lock is unpickable, but I am perfectly satisfied that the "Yale Lock," with corrugated key, is the most secure key-lock ever yet made.

The increasing sale of their "Yale Locks" demonstrated that a market existed for locks of the best quality, and also, by reason of the satisfaction which these locks gave to users, led to frequent requests from architects, owners and the trade for a line of locks for inside use, which, while not necessarily possessing that degree of security of the "Yale Locks," should be sufficiently secure and of equal quality of material and workmanship. This led to the production of "Standard Locks." The company seems to have carried out in the manufacture of this lock the same excellence in workmanship and design which has made its name famous throughout the world, while its perfect manufacturing facilities and large production enables it, as they assured me, to sell them at prices often lower than those of inferior goods, and always as low as it is possible to produce goods of similar grade.

After a short time spent in general conversation with the courteous officers of the company, and having thanked them for the attention shown me, I devoted the few remaining hours of my stay in Stamford to a drive around the town, which I found most enjoyable; the residences along the drives, and the grounds surrounding them, being exceedingly attractive, and in many cases magnificent.

INDUSTRIAL DEPARTMENT.

Modern Fireproofing.

FIREPROOFING with hollow, fireclay tile has in a decade, from a beginning as an almost unused and unappreciated system, increased in use and in value as a necessary structural part of a building, until all structures, except residences, are considered incomplete without a covering of all combustible parts with this non-combustible adjunct. While in Europe brick partitions and arches have always served as a protection against fire, and this method has been adopted in this country in the past, the immense cost and added weight has confined the attempt to render buildings fireproof to the most important public and private works. It remained for America and Chicago to demonstrate that a new and, in both a structural and protective sense, better material could be used. The pioneer in this new departure was a contractor named Johnson, who was the founder of what is now so universally known as the chief fireproofing company of the United States—the Pioneer Fireproof Construction Company of Chicago. Though the methods employed by Mr. Johnson were crude, they laid a foundation for all the future improvements in material and methods. Mr. E. V. Johnson, the secretary and general manager of the company, and son of its founder, has developed the system until floor arches of nine-foot span between iron girders, and but five inches rise, the covering of iron columns and wood joists, hollow partitions of from three to seven inches in thickness, and any number of special forms are made of hollow tile. Office buildings first received the necessary fireproofing, and as the structures increased in height and cost the fireproofing became more complete, then the attention of banks was called to the economy of building a complete fireproof building rather than depend on a small and often insufficient brick vault. Court houses and state buildings came next in order, the state house at Indianapolis fireproofed by this company being the most extensive and complete example of fireproofing ever erected, and now to build a structure of any importance without this guaranty against fire, stamps the owners, be they corporate or private, as not only reckless, but almost as criminally negligent as if the building was constructed with insufficient strength of foundation or walls. And this is as it should be. Iron is so easily destroyed by fire that it should be protected wherever it forms part of the structural support in a building, and the building ordinances should compel fireproof protection in the same way as the building of sufficient foundations and walls.

The work of the Pioneer Fireproof Construction Company has become known to every city of the West from Minnesota to Texas, and in Chicago such structures as the Pullman, Rialto, Rookery, Royal Insurance, Board of Trade, and other office buildings fireproofed by this company, and which from time to time have been visited by the architects who visit the city, have demonstrated their immense capacity for supplying and placing this material. The works of the company at Ottawa occupy seven acres, and fourteen immense kilns are in constant operation, comprising the most extensive works in this particular manufacture in the country. The yards of the company at Chicago, on Sixteenth and Clark streets, are also extensive, and an immense amount of hollow tile is stored here for immediate use.

A building well worth seeing is the company's offices at these yards. It is entirely composed of hollow tile, and shows the adaptability of this material for wall construction.

In literature but little yet exists upon practical hollow tile fireproofing. Many have written upon the subject theoretically, and have done much to call attention to the system. A treatise was published by the Pioneer Company a year ago, written by the manager, E. V. Johnson, which, with frequent illustrations, showed the purpose, scope and adaptability of hollow tile for fireproofing. In giving this to the architects, while doing so from trade motives, the company made a valuable contribution to the field of building literature.

Fireproofing should be insisted upon by architects in all large structures. When a knowledge of it is lacking, the architect can readily obtain the presence of Mr. Johnson, who will explain it to the inquiring owner, and in this way the future building will be more stable and the losses by fire materially decreased.

New Publications.

TO NIAGARA FALLS, ST. LAWRENCE RIVER, WHITE MOUNTAINS, THE HUDSON, AND THE SEA. Published by the Passenger Department of the Michigan Central Railway.

AMONG the many publications annually issued by the railroads of the country, describing the beauties of hill, river, lake and forest reached by their several routes none has appeared which so well deserves the praise for good taste and illustrative merit as this. Leaving the advertising of the route to be inferred rather than expressed, the author in his frontispiece seeks then to express in poetry the charm of such scenes as the volume beautifully illustrates, and invites the busy and enervated to leave work and care awhile, in these lines from the poet Motherwell:

They come! the merry summer months of beauty, song and flowers;
They come! the glad some months that bring thick leafiness to bowers.
Up, up, my heart, and walk abroad, fling care and care aside;
Seek silent hills, or rest thyself where peaceful waters glide;
Or, underneath the shadow cast of patriarchal tree,
Scan through its leaves the cloudless sky in rapt tranquility.

—William Motherwell.

Pursuing this descriptive and illumined invitation through pages and pages of colored etchings and engravings, the author takes the reader to the northern wilds of Mackinac island, northern lake Huron, to the Falls of Niagara, the White Mountains, Adirondack mountains and to the seaboard. The Canadian Pacific's delightful route, St. Thomas to Ottawa, Montreal and Quebec, is minutely described, and the delights of the Thousand Islands and the Lachine Rapids, all designed to induce the man of business

to leave the hot and crowded city and take not only himself, but his "sisters, cousins and aunts" and "all the children" away over the route described for a summer holiday, in which the small outlay in carfare will cover the best of medicine for the upbuilding of not alone the physical, but the mental and moral man, as no physician could. We say little about the typography of the work, though it is as fine a sample of the printer's art as can be produced, because it only aids in the mission of the work to place the attractions it describes in as advantageous a light as possible, knowing that after its contents are read and the trip taken, that its authors will for a year, at least, remain in the minds of the reader, and when the time for another trip comes it will require no such beautiful work as this to induce another trip from Chicago to the sea.

MR. RIPLEY HITCHCOCK, of New York, was recently commissioned by *The Century* to visit our western cities and report upon the art movement in progress there. The results of this visit are recorded in an illustrated paper in the August (midsummer) *Century*, from which we quote the following: "Eastern advantages are obvious enough, and yet if one cares to follow out comparisons it will be found that the activity represented in the building up of western art museums and schools during the last six years has had no counterpart in the East. Whatever gropings in the dark there may be for a time, this western art movement has gone far enough to insure certain definite results. The importance of art, however the word may be defined, has been publicly recognized. Art collections of various kinds are placed within the reach of the people at large. Facilities for education in art have become accessible. If there were nothing more than this, the results would represent at least an elevating influence. But this movement comes at a time when we are rapidly accepting the ideas that training of the hand should accompany training of the brain, and that educated application of art to industry is a valuable, economical end. England, Belgium, Germany, and France later, have learned the lesson, and the agents of even Russia are studying the museums and schools of applied art which are in every German city. In the fifteen years since Massachusetts took the hint from South Kensington and made drawing a part of her common-school curriculum, these ideas have taken shape in one way or another, west as well as east. All this has met with opposition, of course, as the Boston artists ridiculed the adoption of South Kensington theories and practices. Yet Massachusetts is now building an ampler home for her State Normal Art School, and her publicists in speeches and reports are demanding more popular education in art that the state may not lose her supremacy in the finer industries. The same demand is felt, and has been answered in a greater or less degree, in many of our cities. It is this demand based upon the practical value of art-training in industrial work which will broaden the usefulness of the western art museums and schools."

Inventive Genius in Building.

(Reported specially for THE INLAND ARCHITECT AND BUILDER, by Franklin H. Hough, solicitor of patents, 925 F street N.-W., Washington, D. C.)

- 342,426. Door-check. C. Cevor, Waco, Tex.
- 342,710. Door-hanger, Sliding. C. C. Runyan, Mansfield, Ohio.
- 342,345. Water-proof covering for Roofs. A. Ford, London, England.
- 342,649. Shingling-bracket. W. H. Smerdon, Taunton, Mass.
- 344,947. Clapboard marker. J. F. Beebe, Adair, Iowa.
- 344,821. Door check. W. W. English, Lincoln, Nebraska.
- 344,914. Door hanger. J. C. Keppeler, St. Louis, Mo.
- 345,089. Roofing metal. W. W. Walter, Canton, Ohio.
- 345,001. Wall and ceiling, fireproof. J. Smith, Cleveland, Ohio.
- 345,451. Door check. H. A. Rost, Richmond, Indiana.
- 345,273. Sash fastener. J. F. Browne, Hyde Park, Illinois.
- 345,483. Sash fastener. M. F. Cole, Letts, Iowa.
- 345,400. Tile roofing. C. Weise, Dermbach, Germany.
- 345,894. Buildings, gutter for. J. Gray, Amelia, Ohio.
- 345,988. Doors, supporting device for. F. V. Phillips, Chicago, Illinois.
- 345,605. Sash holder. M. Bourke, Youngstown, Ohio.
- 345,857. Sashes, device for operating. G. W. Paine, Sullivan, Illinois.
- 346,220. Blind, window. C. W. Radford, Oshkosh, Wisconsin.
- 346,294. Door closer. N. Leidgen, Milwaukee, Wisconsin.
- 346,192. Door fastening. I. H. Congdon, Omaha, Nebraska.

Synopsis of Building News.

Abilene, Kan.—Architect Geo. W. Shaffer, of Emporia, reports: For Reformed Church, one story, brick building, 44 by 65 feet, cutstone trimmings; cost, \$5,500; foundation in. For Dr. E. E. Hazlett, two-story frame dwelling, 36 by 52 feet; cost, \$5,000; drawings under way. For David McCoy, two-story and basement, brick store and hotel building, 56 by 80 feet; cost, \$9,000; foundation in.

Atlanta, Ga.—Architect Gust. E. Leo reports: For L. De Give, improvements on opera house, cost \$7,000; under way. For B. F. Hill, Jr., addition to residence, cost \$3,000; under way.

Athens, Ga.—Architect W. W. Thomas reports: Outlook, not encouraging. There is much work being done in the way of improvements and additions to dwellings, and some business houses; but the following are the only buildings of a public nature now projected here: For the city, two two-story brick school-buildings, 60 by 57 feet, slate roofs; cost \$16,000; under way; W. B. McGinty, builder. For Athens Opera House Co., opera house; to cost \$25,000; projected, and work will probably commence in October.

Beardstown, Ill.—Architects Bullard & Bullard, of Springfield, report: For C. M. Spring, two-story frame dwelling, 30 by 51 feet, to cost \$3,500; drawings ready.

Birmingham, Ala.—Architect H. Wolters, of Louisville, Ky., reports: For Louisville & Nashville Railroad, union passenger depot, 50 by 215 feet, brick, stone and terra-cotta; cost, \$83,000; under roof. Chas. Pearce, of Indianapolis, Ind., contractor.

Bradford, Pa.—Architect C. H. Owsley, of Youngstown, Ohio, reports: Frame school house, 75 by 85 feet, slate roof, hot air heat; cost, \$14,000; projected.

Buffalo, N. Y.—Architects R. A. & L. Bethune report: Livery stable for Messrs. White Brothers; cost, \$10,000; contracts not yet awarded; building to be of brick, and located on Thirteenth street. Niagara street, brick shops for the Buffalo Hammer Company; cost, \$15,000; contractors, E. & J. Lannen and J. Hoffmeyer. They have also prepared plans for Police Station No. 8; cost, \$16,000; on William street; contracts not yet awarded.

Architects Swan & Falkner report: Jersey street, corner West avenue, brick residence; cost, \$8,000; owner, S. L. Mason; contractor, William Schumacher. Linwood avenue, frame residence; cost, \$4,500; owner, L. F. Messer; contractor, Emory Close.

Architect W. W. Carlin reports: Bouck avenue, frame residence; cost, \$5,000; owner, Byron P. Angell. Mr. Carlin has also prepared plans for a summer residence at Lake George, N. Y., for Mr. Monroe B. White, of this city; cost, about \$6,000. Also the plans for a residence at Elmira, N. Y.; cost, \$3,000; for E. J. Markham.

Carrollton, Ohio.—Architect L. B. Valk, of New York City, has prepared plans for the Presbyterian Society for a one-story church building, 32 by 58 feet, brick, slate roof, hardwood finish, stained glass, steam or furnace heat; cost \$3,200; under way; N. E. Wash, pastor; Bider & Deevers, masons; James Daniels, carpenter.

Castleton, D. T.—Architect Geo. Hancock, of Fargo, reports: Stone Episcopal Church building, 24 by 75 feet; cost, \$5,000; under way; J. N. Milton, of Fargo, builder. This building is a gift to the city by Gen. G. W. Cass, now of New York City.

Cedar Rapids, Iowa.—Architect W. A. Fulkerson reports: The building season has been dull. Outlook for fall work is better. For Geo. Henderson, one-story frame cottage, 30 by 40 feet, under way; Mr. Hopkins, builder. For Craft's estate, brick store and office building, 40 by 80 feet; cost, \$15,000; under way; A. H. Connor, builder. For Wm. King, two-story brick store, 23 by 80 feet; cost, \$3,500; under way; A. H. Connor, builder. For Hon. S. Z. Dows, plans for steam heating, three-story building, 100 by 140 feet, projected. Also for a double house, projected. For B. F. Hinds, dwelling, 38 by 50 feet, projected.

Chicago, Ill.—Architect O. J. Pierce has made plans for an eight-story store building, 64 by 100 feet, to be erected on Fifth avenue, between Jackson and Quincy streets, for F. P. Owings. It is to be built of marble and greenstone. The style will be moresque, freely treated to adapt the building to its proposed use. The first story front will consist of three massive, polished semi-detached columns, and four polished piers, separating the four doors and two large plate glass windows. The second story will have two round windows, each 12 feet in diameter, and four windows with moresque heads, containing beveled plate glass transoms. The next three stories will be two continuous marble oriel, with bent plate glass in the flank windows, and four additional windows, and each story being differently treated in detail. In the sixth story will be four broad and eight narrow windows of moresque design, separated by moresque, mullion columns, carrying from their imposts brackets supporting balconies in the seventh story. These balconies will be partly projecting and partly recessed, and surrounded by graceful gilt railings. Six slender, moresque columns carry the lines of support to the eighth story and will bear up the two broad, oriental arches and the carved frieze and cornice. The building will have vaults, steam heating, elevators, etc.; cost \$80,000.

Architects Thomas & Rodger report: For C. P. Thomas, three three-story stores and flats, 60 by 80 feet, on Cottage Grove avenue, Anderson pressed brick, terra-cotta trimmings; cost \$20,000; contracts not let. For Duncan McBean, two-story dwelling, 25 by 50 feet, at 3640 Prairie avenue, to be built of rock faced buff Bedford stone; cost \$10,000; under way; J. Bloomfield, mason; Wm. Mavor, carpenter. For Monroe & Bayne, four-story apartment building, corner La Salle avenue and Locust street, Anderson pressed brick, buff Bedford stone trimmings; cost \$40,000; Jas. Conley, mason; The C. J. L. Meyer & Sons Co., carpentry. For Mrs. Mary Pollard, four-story flat building, 25 by 80 feet, Anderson pressed brick, brownstone trimmings, corner of Lake avenue and Thirty-eighth street; cost \$10,000; under way; McDermott & O'Brien, masons; M. Raher, carpenter. For Mr. Mollan, two two-story dwellings, on Oakley avenue and Polk street, Anderson pressed brick, stone trimmings; cost \$10,000; Wm. Zuelsdorf, mason; Wartman Bros., carpenters. For Mr. White, three two-story dwellings, on Oakwood avenue near Forty-second street, pressed brick; cost \$12,000; contracts not let. For Dr. Almon Brooks, three three-story stores and dwellings, 68 by 80 feet, on Wabash avenue near Sixteenth street; cost \$30,000; John Angus, mason; Steinmetz & Eilenherger, carpenters; building under way. Completing three brownstone front houses on Grand boulevard near Forty-third street, for W. V. Lawrence, Esq., of Montreal, Canada. These houses are to be all finished in different kinds of hardwoods, triple landing stone steps, projecting porches, steam heat and every requisite of strictly first-class houses; cost of finishing \$25,000.

Architect F. B. Townsend reports: For J. L. Higgie, three-story stores and flats, 165 by 112 feet, corner Ogden avenue and Harrison street, pressed brick, Bedford stone trimmings, felt roof, iron channels, beams, etc., galvanized iron cornice, closets and bath, skylights, hardwood finish, bells and speaking tubes, marble mantels, dumb waiters; cost \$40,000. For W. S. Hall, block of one-story stores, 85 by 75 feet, corner of Taylor and Kendall streets, pressed brick, terra-cotta trimmings, felt roof, galvanized iron cornice, closets and bath, skylights; to be commenced at once; cost \$10,000.

Architect H. R. Wilson reports: For H. Davis, ten two-story dwellings, 220 by 46 feet, 817 to 839 Walnut street; Indiana pressed brick, Bedford stone trimmings, galvanized iron cornice, felt roof, skylights, closets and bath, stained glass, wood mantels, electric bells, speaking tubes; cost \$40,000; under way; day work. For T. C. Gregory, two-story residence, 36 by 60 feet, on South Park avenue, pressed brick, brownstone trimmings, felt roof, galvanized iron cornice, skylights, hardwood finish, wood mantels, closets and bath, electric bells, speaking tubes; cost \$35,000; contracts not let; to be commenced August 15.

Architects Edbrooke & Burnham report: For H. B. Owsley, two-story residence, 31 by 60 feet, on Ashland avenue near Adams street, buff Bedford stone front; cost \$15,000.

Architect August Bessler reports: For Chas. Lange, two-story and basement store building, 25 by 75 feet, Toledo pressed brick, stone trimmings; cost \$5,500; under way. For Jas. Schroeder, at Summit, Ill., two-story frame store building, 30 by 75 feet; cost \$3,500. For John S. Matson, three-story and basement and attic dwelling, 23 by 66 feet, corner O'Brien and Union streets; Indiana pressed brick, stone trimmings; cost \$6,000; under way. For J. W. Popp, three-story and basement store building, 25 by 75 feet, West Twelfth and Wood streets; Anderson pressed brick, stone trimmings; cost \$7,200; under way. For Hugh Burns, two-story flat building, 22 by 48 feet, Fourteenth street, near Blue Island avenue; Indiana pressed brick, stone trimmings; cost \$3,500; under way. For Mr. Millen, on Taylor street, between Ashland avenue and Laffin street, three-story flats, 21-6 by 56 feet; St. Louis pressed brick, Euclid stone trimmings, all modern improvements; cost \$5,000; projected.

Architect S. Linderoth reports: For Wm. Claney, two-story flat building, 43 by 71 feet, on Armour, near Indiana street, Anderson pressed brick, terra-cotta trimmings, pine and hardwood finish; cost, \$8,500; under way; N. Hansen, mason; J. Collings, carpenter; Bowman Bros., plumbers. For H. A. Nelson, two-story residence, 21 by 50 feet, at 12 Otter street, frame, brick basement; cost, \$2,000; not let. For A. Laufermann, two-story residence, 26 by 68 feet, frame building, brick basement; cost, \$5,000; cost, \$5,000; under way. For J. Jensen, three-story and basement and attic, store and flat building, 36 by 80 feet, corner of Division and Vedder streets, Anderson pressed brick, terra-cotta and Euclid stone trimmings, iron and plate glass store fronts; cost, \$15,350; under way; F. Nehls, mason; C. E. Carson, carpenter.

Columbus, Ohio.—Architects Kremer & Hart report: For Foster & Kinneer, store and office building, 63 by 112 feet, pressed brick, stone trimmings; cost, \$20,000; brick work nearly completed. For Louis Zettler, four-story store and flats, 35 by 62 feet; cost, \$8,000; foundation just finished. Also dwellings for Messrs. Jervais and Watson; cost, \$3,500, and \$2,100, respectively; both under roof. For Messrs. Kinneer & Foster, three-story brick building, 112 by 62-6 feet, Zanesville pressed brick, stone trimmings; cost \$25,000. For W. E. Horn, three-story store building, 42 by 112 feet, pressed brick, Berea stone trimmings; cost \$18,000. For Hon. Allen G. Thurman, three-story apartment building, 55 by 100 feet, pressed brick, Berea brownstone trimmings, iron, stained glass, etc.; cost \$20,000. For John Zettler, four-story store building, 35 by 62-6 feet, Zanesville pressed brick, Berea stone trimmings; cost \$10,000; all the above are under way.

Council Bluffs, Iowa.—The government building is nearly ready for the roof, towering far above the adjacent buildings. It has a fine appearance at this stage of the work.

The county court house is up to the second floor. The Episcopal Church is about completed; ready for occupancy, except the tower, which is roofed over where it emerges from the roof. The walls are of stone, the roof slate. The structure has a pretty effect. As to spires, they do not seem adapted to this locality; three other buildings in this city have the truncated appearance of this new church. Several years ago a spire blew down and demolished the church to which it belonged; the church was rebuilt, but not the spire. Since then a fine spire was built on one of our school houses. It was taken down by order of our school board a short time after the Kansas City disaster.

The Catholic Church foundation remains just as it was two years ago, with no prospect that any work will be done upon the church this season.

Our cannery factory is about ready for business. The main building is about 40 by 100, two stories high. Above a basement with other necessary buildings and sheds upon the grounds.

A new foundry building is under contract, to be put up this season, 40 by 150 feet, two stories; a wing, 40 by 60, one story.

The improvements upon our business street are small, one two-story brick cigar-store, about 12 by 35 feet, and a double office building, about 24 by 16 feet, one story, without a prospect of anything else in the near future, as there are several vacant stores in

the center of the business part of the city. Several buildings contemplated last fall were not commenced this spring. No elaborate dwelling has been built here this season. There has, nevertheless, been erected a large number of smaller dwellings of a strictly utilitarian character, scattered through all the resident parts of the town.

Although the city seems to be taking a rest, so far as business houses and elaborate dwellings are concerned, it has not been idle, miles of paving has been done on our streets the last two years, sewers have been built and water service put into a majority of the dwelling houses since the water works was completed.

The greatest burden upon the property owners is the establishing of an extended and comprehensive system of grades, which, perhaps, ought to have been done before, rendering necessary the raising of all buildings on several streets and the filling of the lots and streets several feet. Several bluffs (some of them one hundred feet high) have been graded down to furnish the material for the filling, generally leaving valuable lots where they stood, which were too high to be utilized in their natural state.

Creston, Iowa.—We are informed that there will be no new depot erected for the C. B. & Q. R. R. at this place, as was recently reported by a contemporary.

Dallas, Tex.—Architect J. N. Clayton, of Galveston, reports: Plans prepared for an asylum building; cost, \$30,000; to be built of stone, with slate roof. The design is French Romanesque modernized.

Danville, Va.—We have been informed that Messrs. Ruffin, Blair & Dance propose to erect an opera house in this city. These gentlemen inform us that neither the plans, nor the architect have been decided on yet by them.

Davenport, Ia.—Architect J. W. Ross reports: For Louis Moser, frame dwelling; cost, \$1,500; under way; J. Eddy, builder.

Des Moines, Ia.—Architect A. M. Rouse reports: Business rather dull at present, prospects for fall are better. Have made plans for J. H. Woods for a residence; cost, about \$2,000. For John W. Rowen, frame dwelling; cost, about \$1,500. For J. C. Comstock, frame dwelling; cost, \$2,000; projected.

Detroit, Mich.—Present condition and outlook for building not at all bright. We no more than see one labor trouble settled, than something is the matter with another set of craftsmen, and so it has been until the "boom" for this season is given up. Permits were issued during June for new buildings; cost, \$460,214. For alterations, etc.; cost, \$46,026. Total, \$506,240.

Architects Mason & Rice report: For Trinity Parish, two-story parochial residence, 50 by 85 feet, brick and stone, slate roof; cost \$12,000; Dean Bros., builders. For Hammond, Standish & Co., remodeling old Mansfield market interior; cost \$7,000; R. Helson, contractor. For Y. M. C. A., four-story and basement building, 91 by 96 feet, pressed brick, brownstone trimmings, some of it richly carved. The roof is high, pitched with gables, through which rises a square tower with a dome-like roof; all slated. In style it is in the spirit of the Norman, modified. The special features of prominence are the large arched main entrance, and large bay window over the same. It is located at the corner of Grand River Avenue and Griswold street. The ground floor will be occupied by stores fronting on Grand River avenue. Main rooms of the Association are on the second floor, which has a long reception hall, graced with a large open fireplace. The office is raised off at one end, at the other is the main entrance to a hall seating about 100 persons. The assembly and reading-rooms, and secretary's office, are also on this floor, and can be thrown into a hall as occasion requires. On the third floor are parlors, library, dining-room, etc. The basement will be given up to a large gymnasium, with running track, bowling alley, swimming bath, etc.; cost of building complete \$60,000; under way; Topping & Fisher, masons; Nuppenan & Clark, carpenters.

Architects Hess & Raseman report: For Jos. Perrien, block of two two-story stores, 40 by 60 feet, brick, stone trimmings, gravel roof; cost \$6,650; Spitzley Bros., builders. For Charles Walnuth, two-story double dwelling, 40 by 60 feet, frame, shingle roof; cost \$4,000; Knapp & Boden, builders. For F. A. Hubel, two-story dwelling, 43 by 70 feet, brick, stone trimmings, slate roof; cost \$11,400; Patrick Dee, mason, H. George & Son, carpenters.

Architect A. E. French reports: For N. Cognard, two-story double dwelling, 44 by 50 feet, brick, stone trimmings, gravel roof; cost \$5,000; Stephens & Co., builders. For John Robinson, two-story dwelling, 24 by 70 feet, brick, stone trimmings, gravel roof; cost \$5,200; W. H. Tranes, builder.

Architect Peter Dredrich reports: For Geo. H. Geies, three-story dwelling, 47 by 72 feet; also barn; brick, stone trimmings, slate roof; cost \$12,000; Spitzley Bros., builders.

Architects G. V. Smith & Son report: For Robert Morton, two-story brick building, 60 by 35 feet; cost \$3,000.

Arthur Yeomans is building a two-story factory building, 81 by 75 feet; cost \$5,000.

Contractor A. Chapaton, Jr., is building for himself a three-story dwelling, 42 by 126 feet, brick, stone trimmings, gravel roof; also a barn; cost \$8,000.

The board of police commissioners are to erect a three-story station, 36 by 50 feet, brick, stone trimmings, gravel roof; cost \$8,000.

DeLand, Ill.—Architect R. R. Meredith, of Monticello, has prepared plans for a two-story frame school building, 46 by 36 feet; cost \$3,000; contract let July 20.

East Minneapolis, Minn.—Architects J. T. Moulton & Son, of Chicago, Ill., report: Work on the \$1,500,000 bushel elevator for St. Anthony Elevator Co., previously reported. The building will be completed October 15, 1886.

Emporia, Kan.—Outlook is not encouraging. Dry weather has affected the prospects for fall business.

Architect Geo. W. Shaffer reports: For Lutheran Society, one-story stone church building, 54 by 70 feet; cost \$10,000; plans drawn. For D. W. Eastman, two-story frame, 32 by 48 feet; cost \$3,000; plans drawn.

Emporium, Pa.—Architect David K. Dean, of Erie, reports: For J. W. Walker, two-story brick store building, 50 by 85 feet; cost \$4,000; under way; day work.

Erie, Pa.—Architect David K. Dean reports: For J. W. Sands, three-story brick residence, 41 by 60 feet; cost \$8,000; under way; Wm. Ackerman, builder. For John Saltman, two-story frame residence, 35 by 50 feet; cost \$4,000; under way; McDonald Bros., builders. For Jos. McCarter, brick barn, 40 by 60 feet; cost \$3,000; under way; McDonald Bros., builders. For the Jarecki Manufacturing company's shops, to cover ground 330 by 330 feet; cost \$25,000; under way; Henry Shenk, builder.

Fargo, D. T.—The present state of the building trades is dull, but will be much more lively after harvest, which is always the case in this territory.

Architect George Hancock reports considerable work, but none in Fargo at present.

Faribault, Minn.—Architects M. Shire & Bro., of St. Paul, have prepared plans for a three-story and basement brick high-school building, 50 by 88 feet, pressed brick, Berea stone trimmings and basement, galvanized iron cornices, slate and tin roof. The Rittan system of heating and ventilating and dry closets, hardwood finish and tiling, mantles, stained glass, sky lights, steam or hot air heat, etc.; cost \$28,000; to be completed December 1; O'Brien & O'Neil, masons; L. M. Emery, carpenter.

Findlay, Ohio.—The corner stone of the new court house of Hancock County (Frank O. Weary and Geo. W. Kramer, associate architects, Akron, O.) will be laid August 11, under the auspices of Canton Findlay, Patriarchs militant, I. O. O. F.

W. H. Canfield, contractor and builder reports: Have signed contract with the Columbia Glass company for the erection of the following buildings: Factory for thirteen-pot furnace, 75 by 75 feet; two-story building for Leers, 75 by 50 feet; three-story building for packing and shipping-rooms, 40 by 125 feet; to be built of brick and stone, gravel roof; cost \$17,000; Mr. Canfield is also the contractor for the court house.

Fort Smith, Ark.—Architects Reed & Wright report: Present condition good; few brick buildings under construction on account of scarcity of brick. For T. E. Phillips, one-story frame cottage, 33 by 40 feet; cost \$2,300; projected. For J. McCombs, one-story frame cottage, 28 by 30 feet; cost \$1,200; projected. For W. Johnson, two-story brick stable, 34 by 70 feet; cost \$6,000; under way; S. Robinson, builder. For Mrs. Duffer, two-story frame residence, 28 by 43 feet; cost \$3,700; under way; J. R. Stephens, builder. Also have charge of the construction of the government court house, postoffice and jail building now being erected; cost \$150,000.

Franklin, Pa.—Architect David K. Dean, of Erie, reports: For S. B. Plummer, three-story brick residence, 50 by 70 feet; cost \$15,000; under way; T. A. Dodd, builder.

Galveston, Tex.—Present condition good; outlook encouraging.

Architect N. J. Clayton, reports: Frame additions to insane asylum; cost \$3,000. For Mrs. O. Freybe, two-story brick building, asphalt and shell roof; cost \$13,000; under way. For J. P. Davie, two-story brick building, slate roof; cost \$10,000; under

way. Repairing and finishing; cost \$15,000; projected. For G. Seelegson, two-story frame, slate roof; cost \$15,000; projected. For R. V. Davidson, two-story frame, slate roof; cost \$8,000; projected. For A. Ferrier, frame cottage, slate roof; cost \$6,000; under way. For R. Weis, two-story frame, slate roof; cost \$6,000; projected. For J. M. Burroughs, two-story frame, slate roof; cost \$3,000; projected. For J. Z. H. Scott, two-story frame, slate roof; cost \$6,000; projected.

Goshen, Ind.—Architect Rev. J. N. Barnett has prepared plans for the English Lutheran Church, one-story brick building, 40 by 70 feet, two towers, galvanized iron cornice, stained glass, hardwood finish, hot air heat; cost about \$5,000; under way.

Hillsboro, Kan.—Geo. W. Shaffer, of Emporia, reports: Two-story frame school house, 44 by 50 feet; cost \$5,400; under way.

Huron, D. T.—Builders are fairly busy, workmen are too plenty, and prices being cut.

Architects Bingham & Clements, report: For Nash Bros., two-story brick building, 25 by 80 feet, tin roof; cost \$7,000; under way; Crandall Bros., builders. For Board of Education, two-story brick veneer addition to school building, 34 by 37 feet; cost \$2,700. For same, two-story brick school house, 50 by 75 feet; cost \$12,000; under way; J. Bloodgood, builder. For I. O. O. F., three-story brick store office and hall building, 50 by 80 feet; cost \$15,000; J. Bloodgood, builder. For Myers & Wright, store, office and city hall building, 90 by 90 feet, brick, asbestos roof; cost \$17,000; under way; Elliott, Mitchell & McMillan, contractors. For John Fisk, Jr., frame dwelling, 30 by 45 feet; cost \$5,000; under way; Vaughn & Mitchell, builders.

Jackson, Mich.—Architect Bradford L. Gilbert, of New York City, has prepared plans for Walter A. Bennett for a two-story frame residence, contracts will include closets and bath, stained glass, stable, elevator, steam or hot air heat, hardwood finish, tiling, wood mantels, dumb waiters, etc.; cost not estimated; building to be commenced during July.

Kane, Pa.—Architect David K. Dean, of Erie, reports: For James McDade, two-story brick veneer residence, 40 by 60 feet; cost \$6,000; also two-story brick store, 55 by 95 feet; cost \$4,000; under way; M. V. Vanattan, builder.

Little Rock, Ark.—Fred. J. H. Rickon, Superintendent of Public Buildings, reports: A good deal of small building going on, with fair outlook.

Contract has been let for the Board of Trade building to Messrs. Pettefer Bros., for \$18,678. It will be a three-story brick building, 50 by 140 feet, slate roof. The same firm have also the contract for repairing and remodeling Mrs. Lulu Krouse's Female College; \$5,000 is to be expended.

Louisville, Ky.—Architect H. Wolters, reports: For S. A. Hartwell, two-story brick residence, 30 by 80 feet, slate roof; cost \$6,000; under roof; Fichtner, builder. For P. B. Bate, two-story brick residence; cost \$10,000; not yet contracted. Also considerable work mentioned elsewhere in this issue.

Marshalltown, Iowa.—Architect J. G. Weatherby, reports: But little building going on, the only business block being erected is the I. O. O. F. Hall. It is a three-story brick building; J. G. Weatherby, builder. Foundations are being put in for a two-story brick veneered residence, 21 by 63 feet; cost \$1,800; for C. H. Plunkett.

Mayville, D. T.—Architect Geo. Hancock, of Fargo, reports: For Beidler & Robinson, two-story veneered office building, 25 by 60 feet; cost \$4,000; projected.

Minneapolis, Minn.—Building permits: E. S. Woodworth, two-story wooden dwelling, 1601 Linden avenue; \$5,000. E. B. Clement, two-story wooden dwelling, 1603 Linden avenue; \$5,000. Masonic Temple association, eight-story brick and stone building, Hennepin avenue and Sixth street \$200,000. Hall & Duway, one and one-third-story brick and stone planing mill; Sixth street and Third avenue, north; \$10,000. West & Stevens, two two-story wooden dwellings, 3118 Bryant avenue, south; \$10,000. It is quiet in building circles at present. Prospects of a good business during the fall. Material of all kinds is cheap. Contractors are rather anxious for work, and competition is close.

Architect F. E. Read, reports: For J. A. McDowell, two-story brick stores and dwellings, 42 by 65 feet; cost \$6,000; completed; J. H. McClay, builder. For T. L. Ross, two-story frame dwelling, 31 by 60 feet; cost \$6,500; under way.

Architect W. H. Dennis, reports: For F. W. Foreman, residence, 30 by 60 feet; cost \$6,000; under way; Wolff & Sons, builders. For J. M. Grabbil, addition to store, 22 by 41 feet; cost \$7,000; under way; Joe Mathews, builder. For W. B. Bushnell, residence, 36 by 66 feet; cost \$7,000; under way; day work. For J. G. Gluck, residence, 50 by 56 feet; cost \$12,000; under way; day work. For J. E. Keelyn, residence, 30 by 70 feet; cost \$7,000; under way; F. H. McClay, builder. For J. F. Newcomb, residence, 35 by 40 feet; cost \$4,000; under way. For H. L. Gordon, six-story office building, 76 by 157 feet; cost \$100,000; projected.

Milwaukee, Wis.—Four hundred masons and bricklayers who struck recently, causing an entire suspension of building operations in the city, returned to work today. The boss masons wanted the men to return to ten hours' work a day, while the journeymen made a counter-demand that the bosses sign an agreement to continue the eight-hour system for three years. The return of the men to work leaves matters as before, the eight-hour day continuing without any agreement as to when it shall cease.

Mobile, Ala.—Architect Jas. H. Hutchisson, reports: Present condition and outlook very good. Constant rains have considerably delayed numerous buildings in course of construction during the past month. For Dr. Wm. Master, two-story brick office and residence, 37 by 80 feet; galvanized iron cornice, tin roof; cost \$7,480; under way; Geo. H. Discher, builder. For Fred. Johnson, frame cottage, 35 by 58 feet; cost \$1,200; Olsen & Goff, builders. For Mrs. C. Nasano, new front to three-story brick; cost \$2,550; W. O. Pond & Son, builders. For A. F. Luling, repairs, etc.; cost \$5,000; taking bids. For S. J. Russell, one-story cottage, slate roof; cost \$3,500; taking bids. For M. Forchheimer, two-story brick store, 30 by 80 feet, slate roof, galvanized iron cornice; cost \$8,600. W. S. Foster & Rosette & Fincher, builders. For S. J. Russell, two-story frame residence, 25 by 60 feet, slate roof; cost \$2,850; Jno. P. Emrich & Son, builders. For George Fink, frame cottage; cost \$1,200. For Mat. Toomey, two-story brick store and residence, 40 by 80 feet, slate roof, galvanized iron cornice; cost \$4,600; preparing plans.

Mount Olive, Ill.—Architect C. F. May, of St. Louis, Mo., has prepared plans for a two-story brick school house, 65 by 70 feet, slate and gravel roof; cost \$7,000. John Homer, clerk of school board.

Architects Bullard & Bullard, of Springfield, report: For F. R. Fisher, two-story frame dwelling, 26 by 30 feet; cost \$1,800; drawings ready.

Moline, Ill.—The Baptist Society are about to commence the erection of a frame church building, 55 by 55 feet; cost \$6,000. J. C. H. Read, pastor.

Muskegon, Mich.—It has been decided to postpone the erection of the new depot for the Chicago and West Michigan Railroad Company at this point, for about three months.

Newbury, Mich.—Architect J. B. Sweatt, of Marquette, has prepared plans for the Board of Education for a two-story frame school house containing six rooms, 27 by 30 feet; cost \$5,000; W. J. Power, builder.

New Orleans, La.—Outlook rather uncertain on account of depression in trade and crops.

Architect James Freret reports: For James McConnell, alterations, etc., to two-story dwelling, 23 by 90 feet; cost \$2,300. For Little Sisters of the Poor, brick chapel, workshop and laundry buildings; cost \$16,000; under way; Jas. Freret, builder. For John T. Gibbons, two-story frame dwelling 28 by 121 feet; cost \$10,000; under way; P. Burns, builder. For Mrs. M. A. Dickinson, two-story frame residence, 23 by 96 feet; cost \$4,100; P. Burns, builder. For Mrs. J. Bell, two double two-story frame dwellings, each pair 37 by 47 feet; cost \$3,000; H. Friedrichs, builder. For the Sugar Refining Co., frame building, 40 by 220 feet, at Franklin, La.; cost \$7,000; under way.

New Castle, Pa.—Architect S. W. Foulke reports: Building outlook for fall is very much brighter than three weeks ago. For Wm. Alexander, two two-story stores, 37 by 60 feet, brick, pressed brick front, terra-cotta trimmings; cost \$6,000; under way; Jesse Hamilton & Son, builders. For R. W. Cunningham, one brick dwelling, 33 by 60 feet; cost \$6,000; two brick dwellings, 24 by 61 feet; cost \$7,500; J. G. Weaver, builder. For C. C. Dickson, brick store, 18 by 110 feet; cost \$4,000; under way; Thomas Allen, builder. For Park Opera Co., converting rink into opera house, seating capacity 1,000; cost \$20,000; just completed; Stewart Bros., builders. For Thomas Phillips, two-story and attic brick dwelling, 48 by 60 feet, stone and terra-cotta trimmings; cost \$9,000; plans made; also several less important buildings, repairs, etc., aggregating \$25,490.

New Corporations.—The Anglo-American Portland Cement company, limited, of Chicago; capital stock, \$100,000; Samuel Lowden, Jesse D. Frost, Henry C. Berry, incorporators.

Norfolk, W. Va.—Architects J. T. Moulton & Son, of Chicago, Ill., report: For the Norfolk & Western Railroad Co. grain elevator, 60 by 87-6 feet, bins 36 feet deep, pile and stone foundation, 150,000 bushels storage capacity, with facilities for unloading cars at rate of 50 cars per 10 hours, and shipping to ocean vessels at the rate of 12,000 bushels per hour; also to unload grain from coast vessels at the rate of 5,000 bushels per hour. Work has just been started, building to be completed by November 15, 1886; cost, \$60,000; J. T. Moulton & Son, architects, contractors and builders.

Oberlin, Ohio.—Architects Weary & Kramer, of Akron, report: Preparing plans for Talcott cottage, three-story stone dormitory or ladies hall; cost \$60,000.

Oconomowoc, Wis.—Architect Geo. B. Ferry, of Milwaukee, has prepared plans for a two-story city hall building, 60 by 107 feet, to be built of brick and stone trimmed with red brick, galvanized iron cornices, iron channels, beams, etc., slate, tin, or iron roof; fireproofed, stained glass, hardwood finish, etc.; cost \$19,100; Jens Nelson, mason; Oliver Hansen, carpenter; building under way.

Omaha, Neb.—Architect Sidney Smith reports: Outlook good. Have plans for Mrs. R. G. Clarkson for three-story double frame residence, 39 by 70 feet; hardwood finish; cost \$12,000; contract not let. For H. T. Chase, three-story brick and stone tenement house, 36 by 132 feet; hardwood finish; cost \$25,000; contract let July 10. For I. Corbett, three-story brick and terra-cotta tenement house, 36 by 66 feet; hardwood finish, etc.; cost \$12,000; contract let July 10. For Park Building Association, seven frame cottages, 26 by 36 feet; cost \$1,700 each. For West Side Building Association, ten cottages, 26 by 38 feet; cost \$1,900 each.

Architect Clinton J. Warren, of Chicago, Ill., reports: For Geo. W. Masson, two-story and basement frame packing house, 100 by 100 feet; cost \$25,000.

Architect A. M. Rouse, of Des Moines, Iowa, reports: For L. J. Drake, frame residence, fourteen rooms; cost \$9,000; now finishing.

Architect B. A. Fowler reports: A very busy season. For Bella A. Polack, three brick tenements, 22 by 69 feet; cost \$21,000; under way. For V. G. Lantry, residence; cost \$9,000; under way. For L. H. Korty, residence; cost \$4,000; under way. For Frank E. Moore's, residence; cost \$9,500; under way. For L. M. Bennett, residence; cost \$8,000; projected. For F. R. McConnell, residence; cost \$3,000; under way. For E. Rosewater, addition to residence; cost \$5,000; under way.

Oplousas, La.—Architect H. Wolters, of Louisville, Ky., reports: Two-story brick court house, 50 by 70 feet, slate roof; cost \$62,000.

Owensboro, Ky.—Architects Reid Bros., of Evansville, Ind., have prepared plans for the school board, of Owensboro, for a two-story brick school house, 111 by 66 feet, to be built of brick, trimmed with stone, slate roof; cost \$22,000; J. J. Williams, general contractor; to be commenced at once; hardwood finish, blackboards, slate mantels and closets will be wanted.

Pittsburgh, Pa.—Architect L. O. Dause reports: Building is picking up rapidly in this city, though we cannot expect a first-class year. Have just let contract for two brick houses for Mrs. E. L. Bailey, to Wm. Kerr's Sons; cost, \$14,000. Plans finished for two-story frame dwelling at Mount Dora, Fla., for Dr. O. W. Sadler; cost \$3,500.

Richmond, Va.—At present the outlook is not encouraging. Not much building going on, and a dull fall season is feared.

Architect B. J. Black reports: For Colonel John Murphy, extension, 26 by 40 feet, to three-story and basement brick hotel building, stock brick, iron and terra-cotta trimmings, slate mansard; cost \$8,000; under way; Fred Welty, builder.

River Falls, Wis.—Architect A. P. Wild has prepared plans for Messrs. Burnett & Pratt, for a one-story brick and stone building, 22 by 75 feet; cost \$1,700; building under way; Alf. Michael, contractor.

Rock Island, Ill.—Architect J. W. Ross, of Davenport, Iowa, reports: For School Board, two-story brick school building, slate roof, cost \$20,000; plans in preparation.

Salina, Kan.—Architects Bullard & Bullard, of Springfield, Ill., report: For J. B. Sturman, two-story frame dwelling, 24 by 26 feet; cost \$4,500; drawings under way.

Salt Lake City, Utah.—Architect Jno. H. Burton reports: For J. C. Conklin, three-story frame house, 45 by 50 feet, covered with redwood; cost \$13,000; G. Curley, mason; S. L. B. Co., carpenters. For J. L. Rawlins, two-story brick house, 32 by 45 feet; cost \$6,000; Geo. Curley, builder.

Signourney, Iowa.—Architect J. W. Ross, of Davenport, Iowa, reports: For School Board, two-story brick school house; cost \$15,000; under way; A. P. Swails, builder.

Springboro, Pa.—Architect David K. Dean, of Erie, reports: For Powell Bros., two-story frame residence, 50 by 60 feet, with wing, 20 by 40 feet; cost \$10,000; under way; day work.

Springfield, Mo.—Architects Reed & Wright, of Fort Smith, Ark., report: For N. M. Rountree, two-story frame residence, 36 by 60 feet; cost \$9,000; under way. For Chas. Keet, one-story frame dwelling, 33 by 38 feet; cost \$3,700; under way; Brinnell & Swenson, builders. For A. Otterson, one-story frame dwelling, 23 by 34 feet; cost \$1,900; projected. For T. J. Delany, one-story frame dwelling, 40 by 42 feet; cost \$7,000; projected.

Springfield, Ill.—Architects Bullard & Bullard report: For Miss Sue Chenery, two-story frame dwelling, 30 by 48 feet; cost \$3,000; drawings under way.

St. Paul, Minn.—Following building permits have been issued recently: E. L. Mabon, two-story, brick veneer, tenement block; cost \$12,000. Lyman D. Hodge, two-story frame dwelling; cost \$5,500. C. H. Bradbury, four two-story frame dwellings; cost \$14,000. Owen Thomas, three-story brick store building; cost \$12,000. Anthony Luchanek, four-story brick store and dwelling; cost \$4,500.

St. Louis, Mo.—The following building permits have been issued recently: Missouri Car and Foundry Company, iron-clad frame building, Main street, between Anna and Dorcas streets; cost \$8,000. Joseph Hackman, three-story brick dwelling, Cook avenue, between Spring and Vandeventer avenues; cost \$4,000. John Heugens, two-story brick dwelling, Evans avenue, between Grand and Spring avenues; cost \$2,500. Wm. T. Sherman, two-story brick stable, Bell street, between Ewing and Garrison avenues; cost \$2,000. Dr. Wm. C. Green, two-story brick dwelling, Vandeventer and Delmar avenues; cost \$7,500. Germania Turn Halle, two-story brick addition, Michigan avenue, between Robert and Nagel avenues; cost \$2,700. Joseph Fien, four adjoining brick dwellings, Cardinal avenue, between La Salle and Hickory streets; cost \$10,000. Gartside estate, seven adjoining brick dwellings, Ewing and Franklin avenues; cost \$24,000. August Beinke, two-story brick dwelling, Seventeenth street, between Madison and Mullanphy streets; cost \$2,500. Wm. C. Crawford, two-story brick dwelling, Slattery street, between North Market and Montgomery streets; cost \$2,500. W. L. McKenne, two adjoining brick dwellings, Montrose avenue, between Bernard and Adams streets; cost \$5,150. L. E. Roberts, three adjoining brick dwellings, O'Fallon street, between Eighth and Ninth streets; cost \$5,000.

Architect Fred. W. Falk reports: Business is slowly improving, but do not expect it will recover from the late strikes before next spring. For J. D. Healy, three two-story and mansard-stone fronts, 60 by 59 feet, composition roofs, hardwood finish, stained glass, seven closets each, electric bells, speaking tubes, four marble mantels each; cost \$10,000; under way; F. H. Gray & Bros., builders. For Mrs. C. Nolan, two-story stock, brick-front flats, 22 by 70 feet, bath, electric bells, etc.; cost \$4,000; under way; Hush & Clifford, builders. For Dr. W. R. Endris, two-story and attic, Queen Anne frame dwelling and office, ornamental shingle roof, steam heating, hardwood finish, stained glass, skylights, carved wood mantels, electric bells, burglar alarms, etc.; cost \$6,000; projected; contracts to be sub-let.

Terre Conpee, Ind.—Architects N. Weaver & Son, of Elkhart, report: For John T. Reynolds, brick veneered building, 45 by 60 feet, pressed brick, slate roof, furnace heat, hardwood finish; cost \$6,000; plans under way.

Toronto, Ontario.—It was decided by resolution adopted at the last meeting of the city council: "That the committee on property be instructed to report at as early a day as possible upon the estimated cost and the practicability of converting the present St. Lawrence Hall into a more commodious and suitable city hall, and the committee are hereby authorized to employ a competent architect for this purpose."

The advertisements sent out for a chief commissioner to take charge of the public works of the city brought responses from twenty-one parties residing in Canada, England and the United States, but the executive committee thought none of the applicants satisfactory, and it was resolved at the last meeting of the city council to advertise for new applicants.

Topeka, Kan.—Outlook is very encouraging. Architect Seymour Davis reports : For Ed. Bennett, two-story residence, 57 by 80 feet, molded brick, stone, and terra-cotta trimmings; cost \$20,000; under way; Henry Bennett, builder.

Trinidad, Col.—Architect Geo. W. Shaffer, of Emporia, Kan., reports : For Henry F. Moore, two-story and basement brick bank, hall and office building, 66 by 94 feet; cost \$15,000; plans in preparation.

Vincennes, Ind.—Architect H. Wolters, of Louisville, Ky., reports : Two-story and basement city hall building, 69 by 113 feet; basement, stone; superstructure, brick and terra-cotta; slate roof; cost \$50,000; Chas. Pearce, of Indianapolis, contractor.

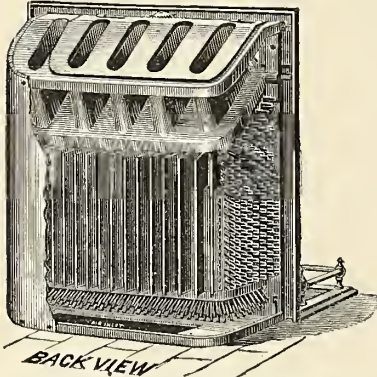
Wahpeton, Dak.—Architect Geo. Hancock, of Fargo, reports : For J. R. Burton, two-story frame house, 25 by 35 feet; cost \$3,000; W. G. Ladd, builder.

Warren, Ohio.—Architect C. H. Owsley, of Youngstown, reports : For W. Stile, two-story frame dwelling, 40 by 55 feet, hardwood finish, hot air heat, slate roof; cost \$4,500; projected. For T. W. Masters, two-story frame dwelling, 35 by 50 feet, hardwood finish, hot air heat, slate roof; cost \$3,000; projected.

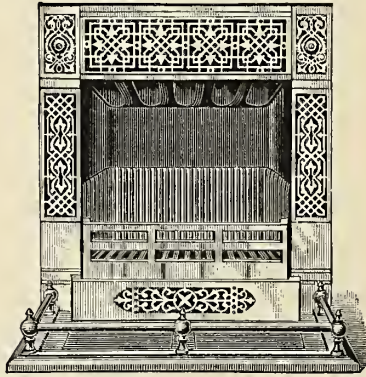
Wichita, Kan.—Architect A. W. Rush, reports : For Moffit, Hartzel & Davis, three-story brick business building, 50 by 100 feet; cost \$10,000; nearly completed; J. McDougall, builder. For Wm. Heller, three-story brick business block, 50 by 100 feet; cost \$10,000; nearly completed; C. P. Smythe, builder. For A. W. Polk, two-story brick business block, 25 by 80 feet; cost \$4,000; G. Gribbs, builder. For Peter Gette, two-story brick building, 75 by 90 feet; cost \$5,000; under way; J. McDougall, builder. Also three-story brick business building, 50 by 100 feet; cost \$12,000; plans ready. For Wm. Geriffinstein, two and one-half-story frame residence, 52 by 84 feet; cost \$15,000; under way; John Sherwood, builder. For same, seven two-story frame dwellings; cost \$16,150; Benefield & Neild, builders. For D. L. Green, two-story frame dwelling, 36 by 40 feet; cost \$2,400; John Kimerle, builder. Also several smaller buildings, for different parties.

Youngstown, Ohio.—Architect C. H. Owsley reports : Present condition and outlook for building very good. For C. H. Andrews, three-story brick block, 80 by 100 feet, stone trimmings, tin roof; cost \$22,000; under way. For E. Mylott, two-story frame dwelling, 20 by 50 feet, slate roof; cost \$2,600, E. Mikesall, builder. For Second National Bank, three-story brick block, 45 by 136 feet, stone and terra-cotta trimmings, slate roof; cost \$30,000; projected.

PRICES OF LABOR.	Buffalo, N. Y.	Chicago, Ill.	Cincinnati, O.	Detroit, Mich.	Kansas City, Mo.	Marshalltown, Ia.	Memphis, Tenn.	Miles City, Mont.	Minneapolis, Minn.	Montgomery, Ala.	Omaha, Neb.	Pittsburgh, Pa.	Richmond, Ind.	Sioux City, Ia.	St. Louis, Mo.	Waco, Tex.	Wheeling, W. Va.	Wilmington, N. C.
Bricklayer.....	\$3 00	8 hrs. 3 20	\$4 50	3 50	\$4 00	\$3 50	\$4 50	\$5 00	\$3 50	\$3 00	\$4 50	\$4 00	\$4 00	\$3 50	\$4 50	\$4 00	\$4 00	\$2 25
Brickmason (Front).....	3 00	8 hrs. 4 00	4 50	5 00	4 00	4 00	5 00	5 00	5 00	5 00	5 00	5 00	5 00	4 50	5 00	5 00	4 25	2 50
Carpenter.....	2 50	2 50@2 75	2 50	1 75@2 25	2 50	2 75	3 00	3 50	2 75	2 50	2 50@3 00	2 50	2 25	2 50	2 40	2 50	2 50	1 75
Cabinetmaker.....				1 75@2 25					3 00		2 50		2 50		2 50		2 25	
Finisher.....		3 00	3 00	1 00@1 75			3 00	4 00	3 00		3 00		2 75		2 75		2 25	
Gasfitter.....	3 50	2 50@3 00	3 25	2 00@3 00	3 00	3 50	8 00	5 00	3 00	3 00@4 00	3 00	3 00	3 00	2 50	3 50	2 25	2 50	2 75
Laborer.....	1 25	1 60@1 76	1 50	1 50	1 50	1 75	1 25	2 50	1 50	1 00	1 75@2 00	1 50	1 50	1 25	1 25@1 50	1 25	1 50	1 00
Painter.....	2 00	2 25@2 50	2 50	1 50@2 50	2 50	2 50	2 50	2 50	2 50	2 50	2 50@3 00	3 00	2 00	2 75	2 50	2 25	2 50	1 75
Glazier.....	2 00			1 50@2 50	3 00	2 50	2 50	2 50	2 50	2 50	3 00	3 00	2 25		3 00	2 25	2 50	1 75
Plasterer.....	3 00	8 hrs. 3 50	3 50	3 25	3 00	3 00	4 00	4 00	2 25	4 00@4 50	2 66	3 00	3 00	4 50	4 00	2 50	2 50	1 75
Plumber.....	3 50	3 50@4 00	3 50	2 50@3 00	4 00	4 00	8 00	4 00			5 00	3 50	3 25		3 50	2 25	2 75	3 00
Stonemason.....	3 00	4 50@5 00	5 50	5 00		3 75	4 50	3 50	4 50@5 00	5 00		4 00	4 00	3 00	4 00	3 50	2 75	
Carver.....	5 00	4 50@5 00	5 50	5 00				4 00			5 00		4 00		3 00		3 00	
Stonecutter.....	3 50	3 75@4 00	3 50	3 50	2 75			9 00	4 00			3 50	3 00		4 00	4 00	3 00	
Stonesetter.....	3 00	4 00	4 00	3 50	3 50			5 00	4 00		4 00	4 00	2 50		4 00	4 00	2 75	
Roofer (Tin).....	2 75	2 75	2 75	1 25@2 25	2 75	3 00	3 00	3 00	2 50	2 50@3 00	2 50	2 50	2 50		2 50	2 50	2 50	2 00
Slatr.....	3 00	3 00	3 25	1 75	2 50	2 75		3 50			5 00	3 00	2 50		2 50@3 00	3 50	2 50	2 00
Stairbuilder.....	3 00	3 25@3 75	2 75	2 75@3 00	3 00	4 00		2 50			5 00	2 50	3 00	3 00	3 00	3 00	2 50	2 50
Steamfitter.....	3 50	3 50	2 50	2 50@3 00	3 50	3 50		8 00	3 50		4 00@5 00	2 50	2 75		2 50	2 50	2 50	3 00



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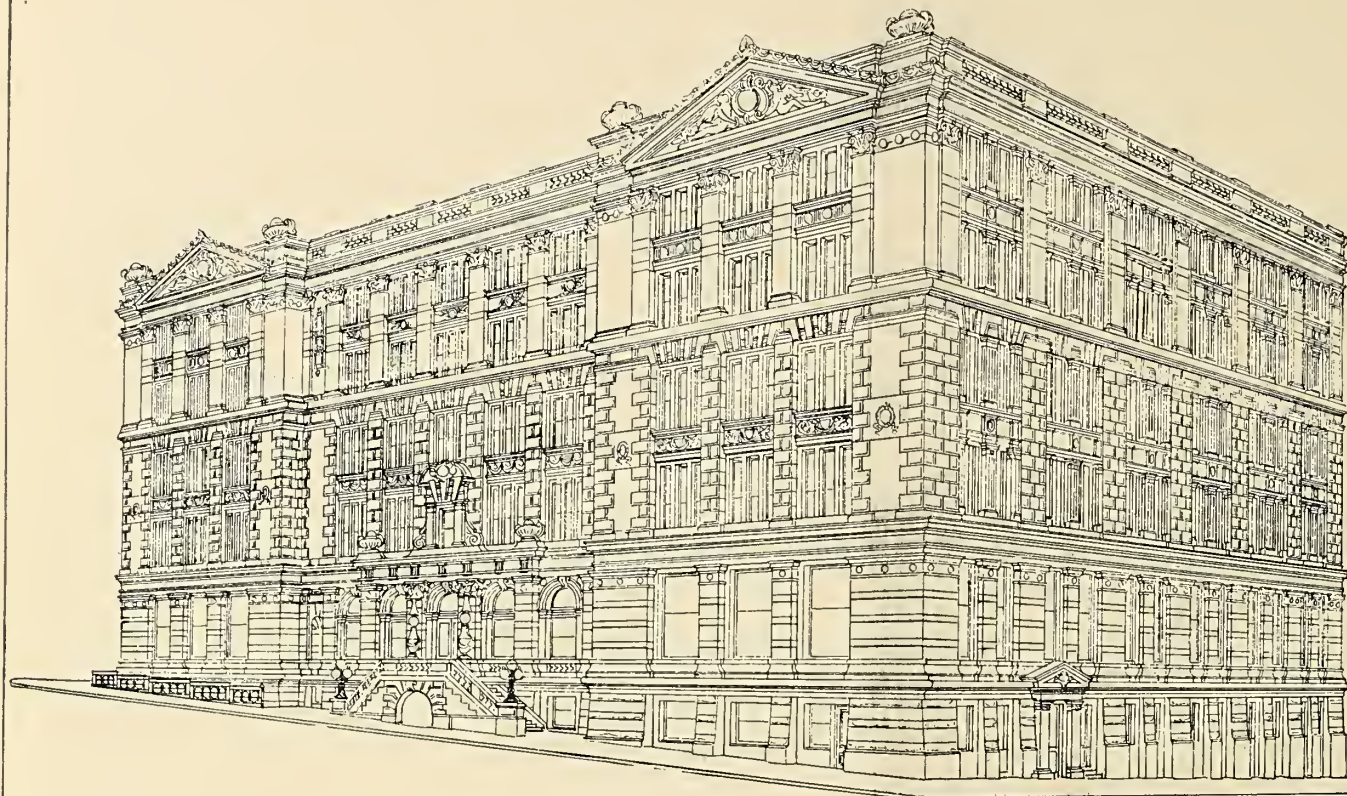
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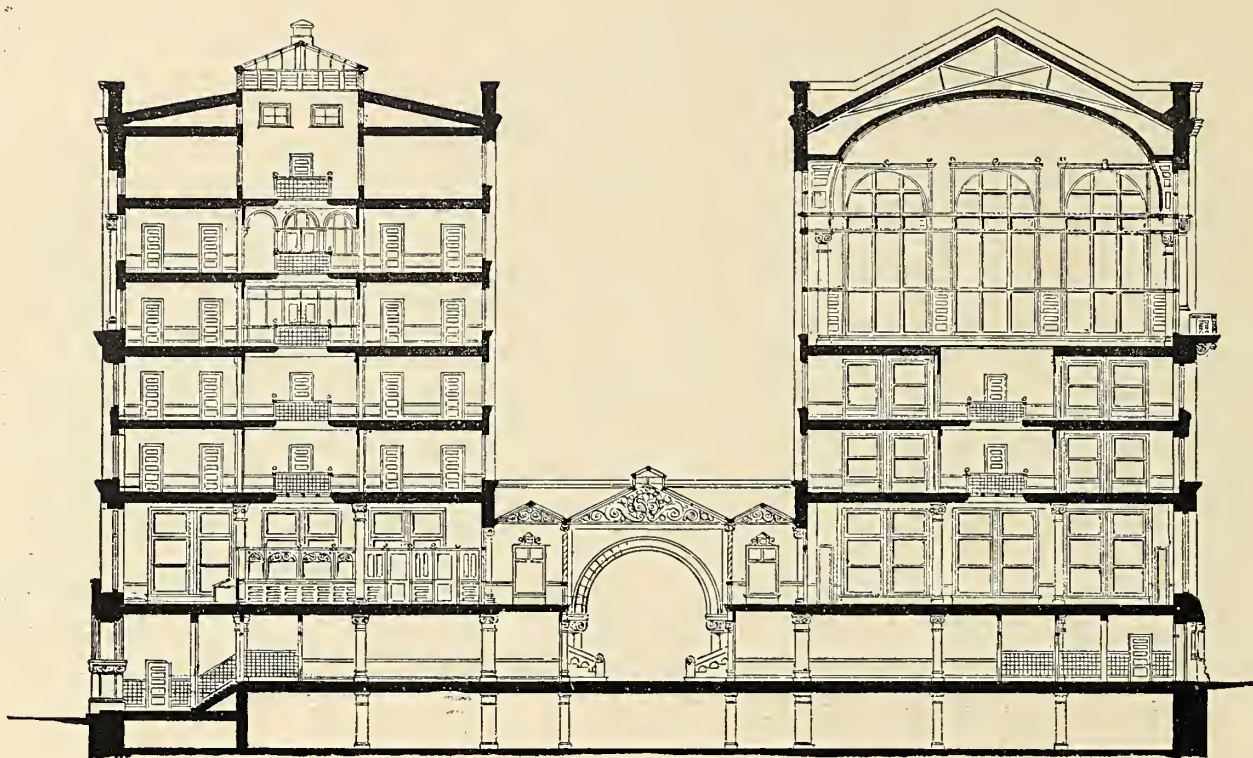
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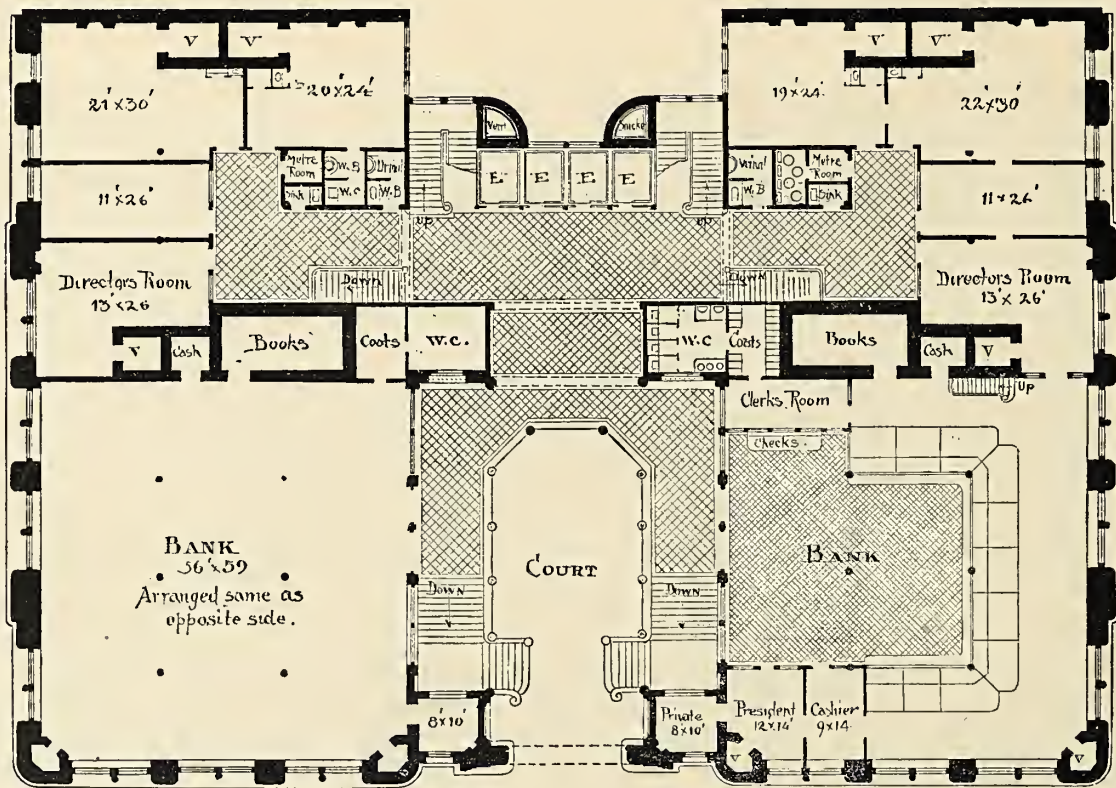
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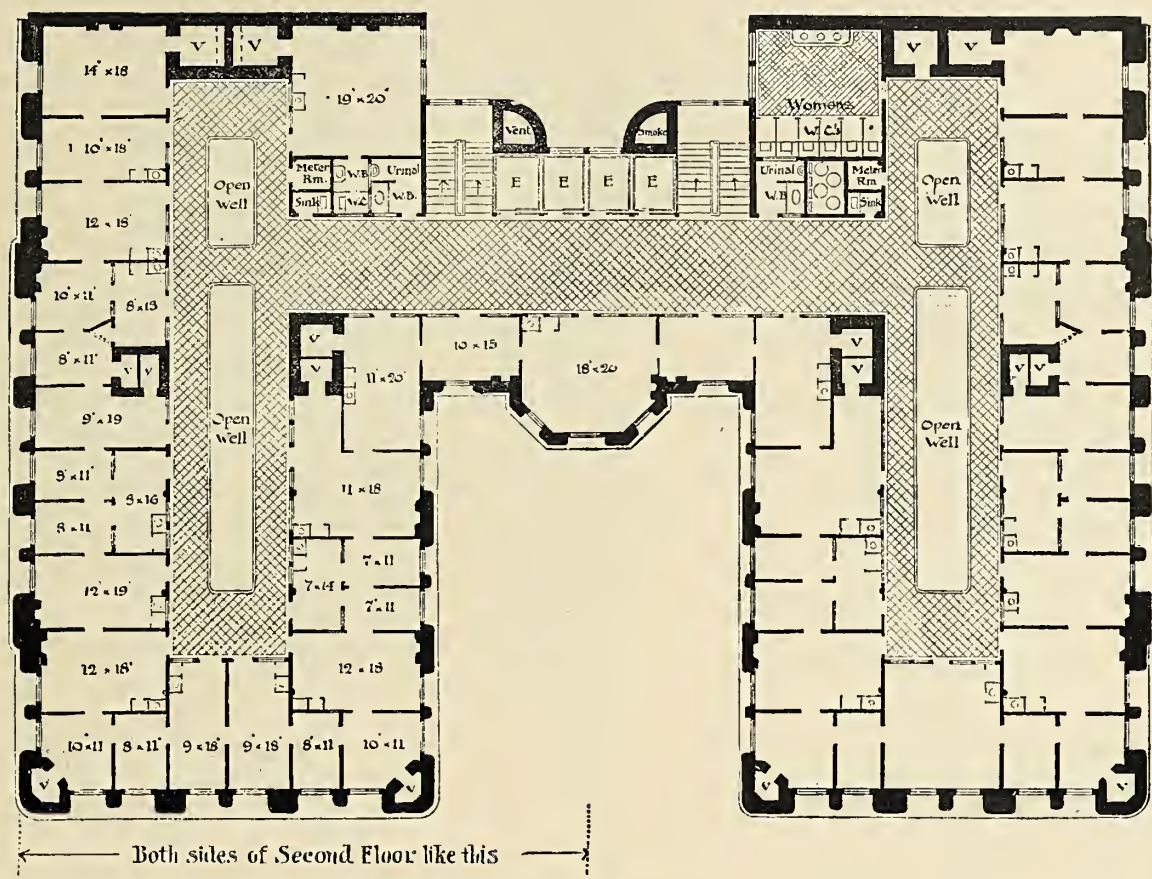
SECTION ON LINE C. D.



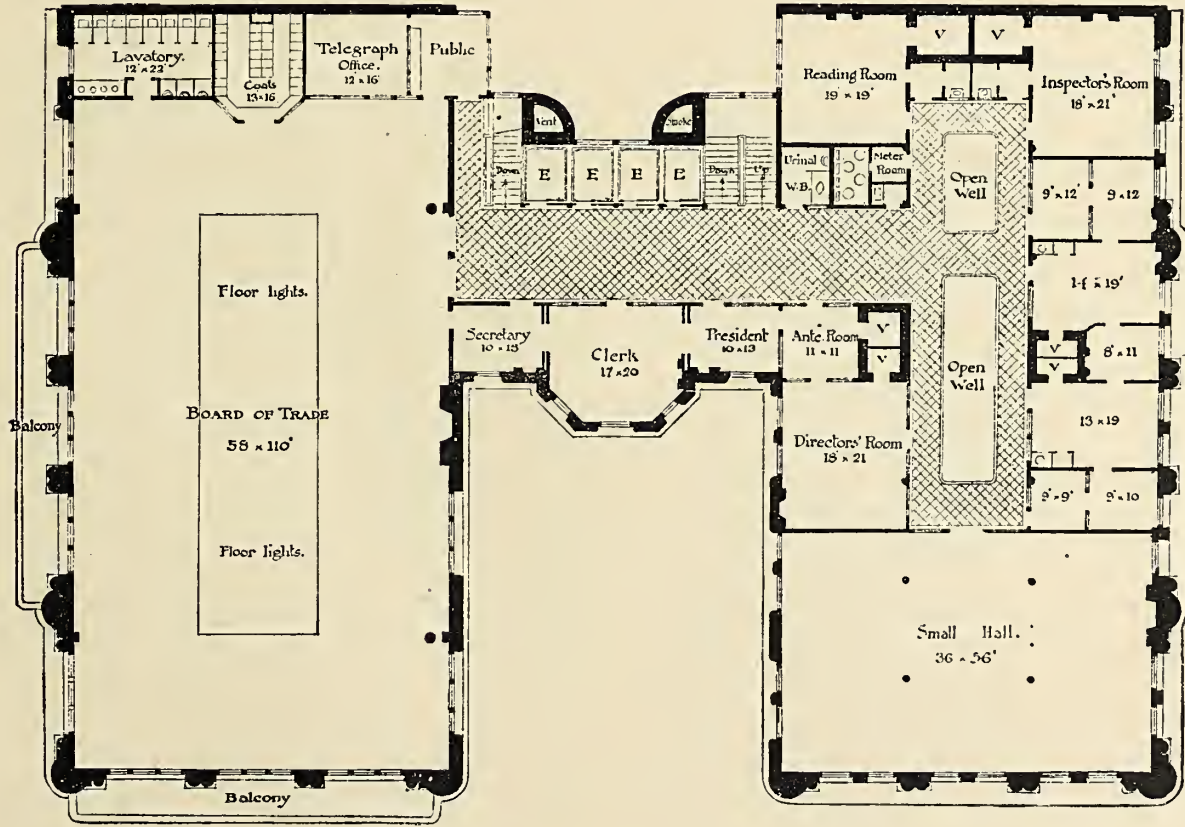
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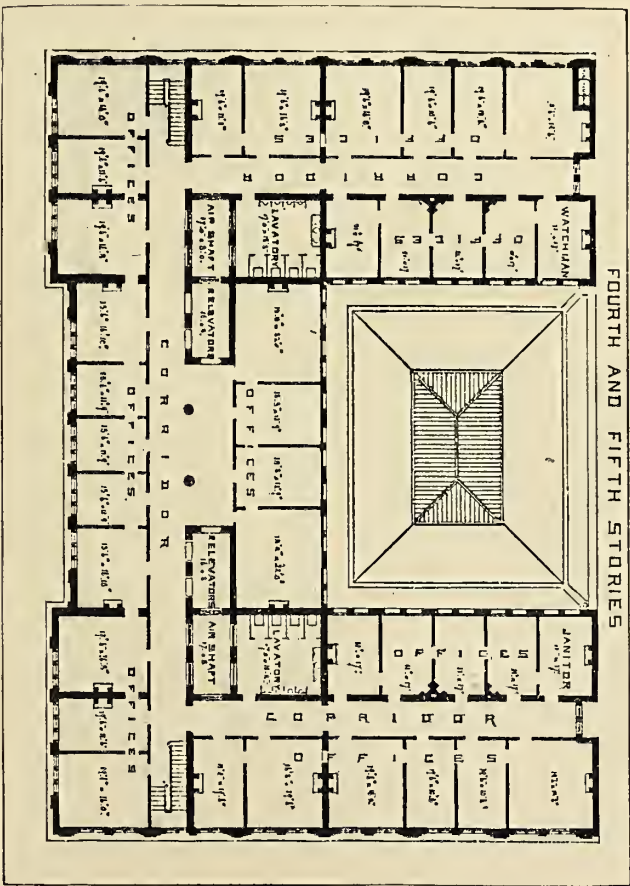
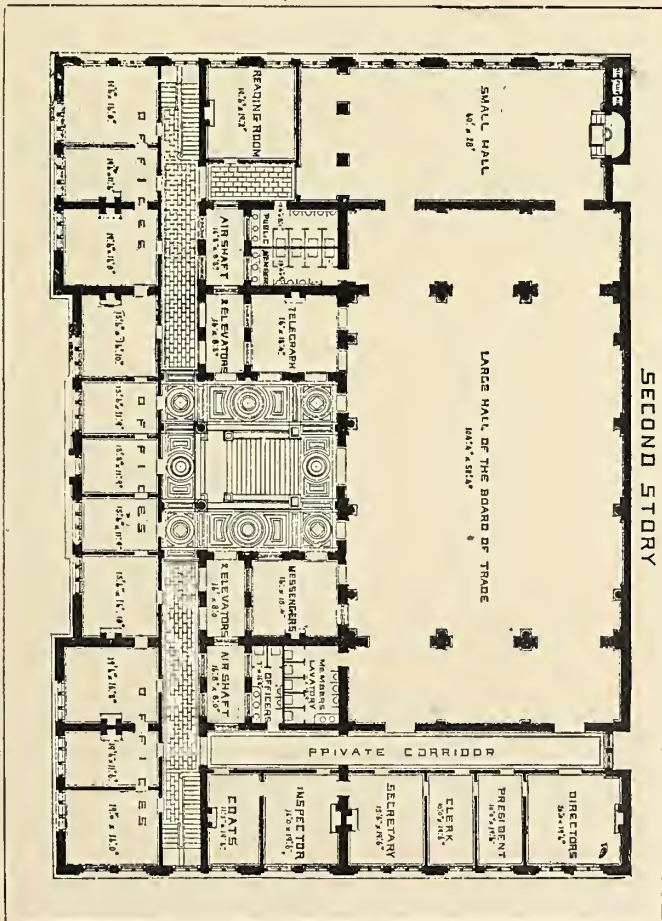
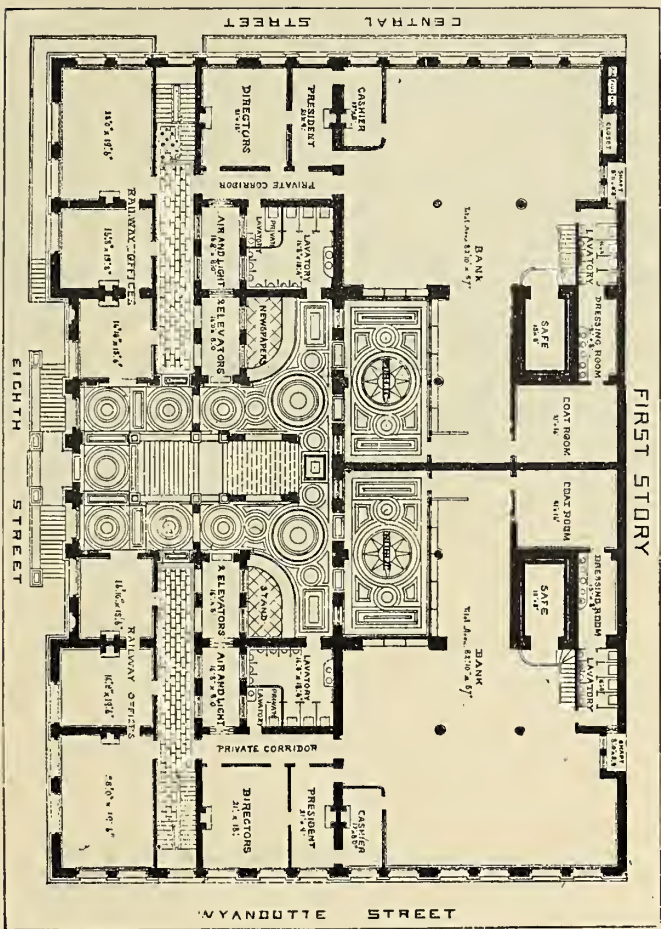
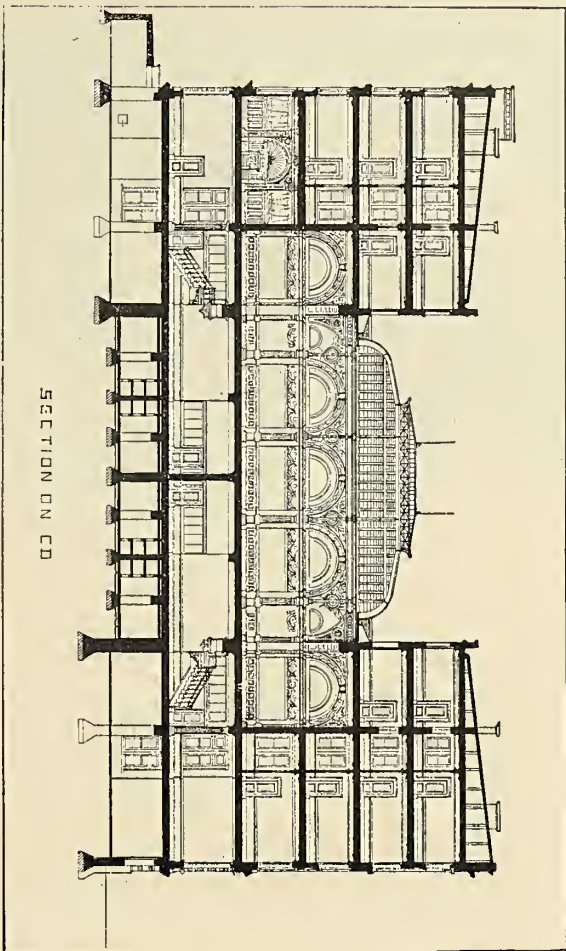


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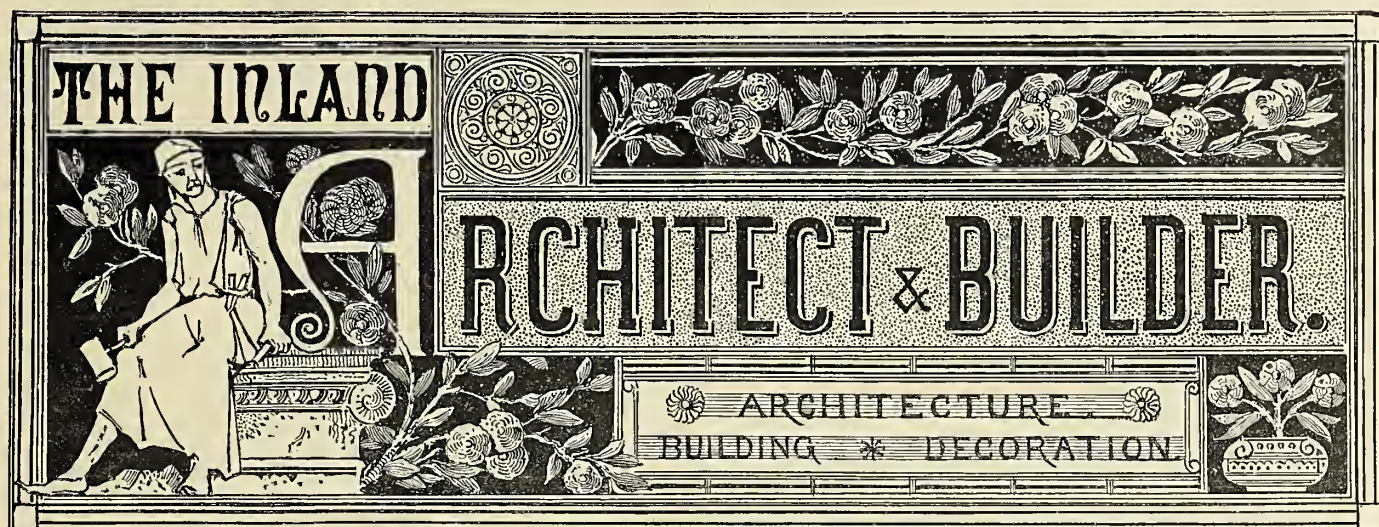
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THIRD PREMATED DESIGN FOR KANSAS CITY EXCHANGE BUILDING.

INTERMEDIATE NEWS NUMBER.



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A MONTHLY JOURNAL
(WITH AN INTERMEDIATE NEWS NUMBER)
DEVOTED TO WESTERN INTERESTS.

OFFICIAL ORGAN OF THE
WESTERN ASSOCIATION OF ARCHITECTS.
(A NATIONAL ORGANIZATION.)

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DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

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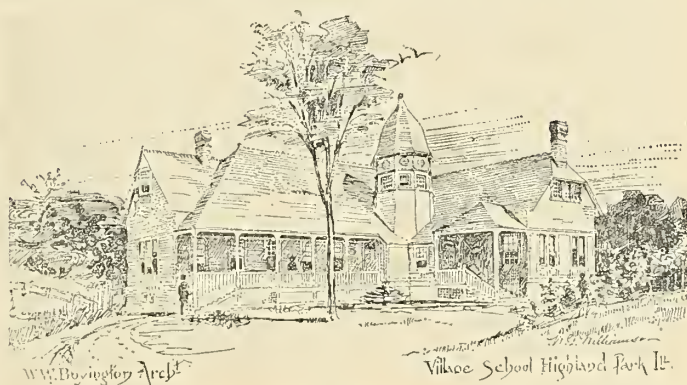
THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

THE Architectural Association of Iowa held its fourth semi-annual meeting at Davenport, on the 11th and 12th inst. A large proportion of the more active members of the association was present. Several important measures came before the meeting, and were either disposed of or referred to committees with the instruction to report at the next meeting. The meetings of the Iowa association are always interesting, and are characterized by a most commendable *esprit de corps*.

ELLIS S. CHESBROUGH, one of the foremost civil engineers of the country, died in this city on the 18th inst., at the age of seventy-three. For some time previous to 1855 he was city engineer of Boston. In that year he came to Chicago and took the position of chief engineer of the sewerage board. He was afterward made city engineer, which position he held till 1877. He planned the sewerage system of Chicago, which included the raising of the grades throughout the city. Among the important works planned and completed by Mr. Chesbrough, in this city, are the La Salle street tunnel, the Fullerton avenue conduits, the deepening of the canal for the purification of the river, and the two lake tunnels which supply the city with water. In addition to his work in Chicago, he was consulting engineer for Memphis, Pittsburgh, Des Moines, Milwaukee, Dubuque, Jacksonville, Detroit, Newport, Providence, R. I., and other cities; constructing the tunnels under the Detroit river at the city and at Grosse Isle. He was chairman of the committee which planned the present sewerage system for Boston. He was consulting engineer for New York City, and planned

the Croton aqueduct system. He also served on committees for improving the water supply of Philadelphia and the drainage of Buffalo, Chattanooga, New Haven and other cities. His work on sewerage is an authoritative treatise on the subject. Mr. Chesbrough was a man of untiring devotion to his duties, and in his death the science of civil engineering loses one of its ablest and most faithful followers.



The Architectural Association of Iowa.

THE fourth semi-annual meeting of the Architectural Association of Iowa was held in Davenport on the 11th and 12th of August. The meeting was called to order at 10 o'clock by President H. S. Josselyn, of Cedar Rapids. The following members were in attendance: H. S. Josselyn and E. H. Taylor, of Cedar Rapids; F. G. Clausen and E. S. Hammatt, of Davenport; F. D. Hyde, of Dubuque, and C. H. Lee and W. L. Plack, of Des Moines.

On motion of Mr. E. H. Taylor the privileges of the floor, without vote, were given to W. H. Crannidge, representing THE INLAND ARCHITECT AND BUILDER.

Mr. F. G. Clausen, in a few happily selected words, extended an address of welcome to the visiting architects.

Mr. F. D. Hyde, of Dubuque, responded to the address of welcome.

President H. S. Josselyn, of the association, delivered the following address:

PRESIDENT'S ADDRESS.

Gentlemen,—The existence of our association has been short, so that to enumerate the number of our semi-annual meetings requires but a small figure. We are now gathered at the fourth, it being the second of our summer gatherings. Scattered as we are over a large territory, it is frequently inconvenient to take the time or incur the expense to attend, particularly when the place of meeting is at a remote point. Under such circumstances to leave a press of business and attend, requires an especial interest in our association, that will have to grow upon many, as they are brought to see that it is permanent, and that its meetings are interesting and profitable.

From some cause or causes the summer meeting at Colfax a year ago was the best attended and, I think, the most successful of any that has been held. We will hope that 'tis not a lessening interest, but rather a larger business that is keeping away some of those who met with us there. Of that number who are absent, one has been taken by the hand of death, Mr. W. W. Sanborn, of Clinton. Two others have left our association, Mr. Ellis, of Marshalltown, and Mr. Hawley, of the same place; one going west and one east, where we hope that the architectural fields are better fertilized and the harvest more prolific. By the removal of the last named gentleman your association is without a custodian of its funds. They were sent to me some months since, and I have

had the responsibility of caring for them until now. Your Board of Management will doubtless fill the vacancy during this meeting. In the work of the association we are anxious to accomplish the most good possible, and to keep up and increase the interest in it and its work. To attend our state association meetings many of those practicing on the borders will often have to spend a day in travel to reach the appointed place, even when there are close connections made by the trains. We all, too, would like to attend the yearly meeting of the Western Association of Architects. Take the time and expense attendant upon all these, and it is considerable. It has occurred to me that rather than propose a less number of meetings to overcome the difficulty of a lack of attendance, that it might be well to consider the dividing of the state into two districts or divisions, each of these to hold one annual meeting and then both to join in another. The western portion of the state should give us some good members, and by such a method we might be able to get them interested. We should try to do this, particularly, as so many of our cities are small, and the conditions often not favorable to the establishment of local societies, and these semi-annual meetings are all the means that many have of discussing professional questions. We have a large field of labor and plenty of work to do, both among ourselves and the public, to bring our profession up to the standing it should occupy, and one thing that should receive some of our attention is that of the best means we can take to bring about an appreciation of what ought to be required of an architect by his client, and also the relation that the latter bears to architectural adviser. Everything that tends to raise the artistic standard of public taste is an aid. Whenever it is possible it would be well for ourselves if we would make moves toward the establishment of trade schools, drawing schools or classes, and of popular lecture courses on artistic and kindred subjects. We will thus be doing something toward the better preparation if the workmen that are to aid us help create an interest in a better class of work, and show that as a profession we appreciate the need of a desire to help along all such movements. If we do not do everything possible to create a demand for better things it will be slow in coming.

In these days of Knights of Labor and trades unions, our meetings are looked upon by many (and of the numbers those who ought to know better) as something gotten up particularly to keep up prices and merely for direct pecuniary benefit. We must try to dispel this idea whenever possible; and in the matters of business that come up try and treat them in such a manner that it can be plainly seen our object is one of mutual improvement for the benefit of ourselves as professional men, who have given ourselves to a life work that has great responsibilities and possibilities, and that in the discussion of many of the subjects we will consider we hope to gain information from the experiences of each other, and thus be better prepared to work out the problems given us, and thus the better serve our clients. Until we are able to make the general public realize that ours is not a trade, and that we can give them something more than they can get from the builders or mere maker of lines and pictures we will be thought but little better than they. Ours is a pioneer work, and what we do to educate the people and elevate the standard of taste among them will largely benefit the younger men who will have possession of the state twenty, thirty, or forty years hence. Without any large centers of population it becomes the more difficult to work upon the artistic side of the people. At such centers there is an accumulation of wealth that demands works of art for one reason or another, and every one of these that is created is an educator, if it be where the public can behold it, which, with a portion at least, of every architectural effort, is the case. In large cities also are problems of construction and sanitation that it is impossible for anyone but a specialist to meet, and when he has been once employed his services are better appreciated and in demand again on less difficult matters. With us too often the question in the owner's mind is, will the employment of an architect pay, merely that he may have plans and specifications to contract from, and get competition bids; there being no question in his mind but that anyone of half a dozen builders could give him just as good a building in every respect; but that to employ them without competition might allow them to make too much profit. No thought above a building such as his neighbor has, gains entrance into his mind, and what a man of better taste might admire, is condemned as homely. In such cases the only appeal is to the pocket book, by proving that buildings well planned return better rents, and that by examples, you can prove, that the work of an architect is better even in that way than that of his architect and contractor friends. The subject of competitions, I hope, will be well discussed and some means be taken to put forth a circular that our members can use as offering recommendations to building committees that will readily appeal to them as sensible and fair, and show to them that by following its provisions they will get the best building possible, when they exclusively desire that end. Where it can be pretty clearly shown that unfair dealing has been resorted to, it would be well for the case to be reported to the association, or a committee; if after examination it seemed to require their having an official notice made of the course pursued through the papers, and its deficiencies pointed out; this to be done only in cases where the grievance was of a nature to affect more than one architect, so that too many matters of an almost private nature might not be brought forward. The competition at Kansas City has shown what may be done. The report of the committee contains some valuable suggestions. The experience of a few more, as carefully carried out, each receiving the benefit of all preceding ones, would give a valuable fund to draw upon for a circular, both as to the recommendations it should contain and the proofs, by practical test, that could be adduced, showing the practical working of the system and its results. I hope these thoughts will bring out the opinions of the members here present, and that we may have a free expression of ideas upon any of them that may be discussed, as also upon all matters of importance coming before the meeting.

C. H. Lee, of Des Moines, moved to dispense with the reading of the minutes of the previous meeting, which was carried.

On motion of Mr. C. H. Lee, E. S. Hammatt and F. D. Hyde were appointed a committee to act on the president's message and report on the advisability of carrying into effect the suggestions embodied.

A general discussion on the question of education and training of architects was entered into by Messrs. Josselyn, Taylor, Hyde, Hammatt and Clausen.

Report of the Committee on Statutory Law was then called and submitted by C. H. Lee, W. F. Hackney, the other member of the committee being absent.

REPORT OF COMMITTEE ON STATUTORY BUILDING LAWS.

Gentlemen.—Your Committee on Statutory Building Laws, which was continued over from the last meeting held at Des Moines, Iowa, have to report that they are not, in their own opinion, nearly so smart as they thought they were.

In pursuance to instructions given at the last meeting to your committee, they made an effort to have your wishes carried into legislation, but so far have not succeeded.

For prudential reasons no clerical help or legal advice could be employed.

Your committee, however, after writing several times to the chairman of the Committee on Statutory Laws of the Western Association of Architects, succeeded in securing a number of copies of the proposed law, but rather too late to be of service. Your committee had several meetings and discussed the subject, and concluded to do the best they could, and accordingly opened correspondence with the chairman of the Senate Committee on Public Buildings, it having been determined that that would be the better way to bring the matter before the legislature. As subsequent events demonstrated, it was unfortunate that the choice had fallen on the chairman above-mentioned.

Your committee had a private interview with said chairman, Mr. Scott, of Story county, and laid before him the needs and necessities for such a law, and urged upon him the importance of passing such a measure at the present session of the legislature.

Mr. Scott promised to give the bill his careful consideration, and report it to the senate, if, in his judgment, he should think best. As the bill was not reported to the senate, your committee have drawn their conclusions on the matter. However, a beginning has been made, the ice has been thawed a little, and with determined work on the part of each member, much more might have been done. Your committee, however, attach no blame for the failure of the measure up to this time but to themselves. Lobbying is a new business to your committee, at least to its chairman, and much had to be learned.

Your committee are of opinion that, with some funds at its disposal to employ such assistance as may seem necessary, that the bill can be passed. It is suggested that a good lobbying member be added to the committee.

No attempt was made toward the improvement or amending the Lien Laws or Party Wall Laws, or other building laws that need revision. Your committee are still hopeful that something can be accomplished, by persistent effort, and are encouraged to go on with the work, hoping to receive some assistance from other of the members not on the committee, in the future.

Respectfully submitted by

C. H. LEE,
Chairman of Committee.

On motion of Mr. Clausen, the report was received and adopted.

A general discussion on building laws brought forward the opinions of all the members present. Mr. Lee motioned to appoint a committee of two to draft a bill to amend the laws on party walls, and also a committee of two to draft a bill on the lien laws, and to use their best efforts to have them incorporated into the laws of the state. Motion adopted.

The committee to memorialize congress to appoint a commission to inquire into the system of architectural education as adopted in Europe, principally in France and Belgium, were re-instructed to carry out the instructions as given at the last semi-annual meeting.

The meeting was adjourned to 9 o'clock the following morning.

The visiting members of the association were conveyed in carriages to the Rock Island arsenal, where, notwithstanding the thermometer ranged in close proximity to 100°, a pleasant afternoon was enjoyed.

SECOND DAY'S PROCEEDINGS.

The meeting was called to order at 10 A.M.

Mr. Guido Beck, of Dubuque, was elected to membership.

The report of the board of management was read and accepted.

Mr. Lee motioned that Mr. Hammatt be nominated for treasurer for the balance of the year, the present incumbent, Mr. W. A. Hawley, formerly of Marshalltown, having removed his office to another state.

Mr. Hammatt was elected treasurer for the rest of the year.

The following paper, by Architect E. S. Hammatt, was read, and its sentiments heartily approved by the convention.

PROFESSIONAL HONOR.

One of the first questions a would-be-architect should ask himself, is, Am I a gentleman? and if the answer cannot be given in a conscientious affirmative do not apply for admittance to this profession, for you are not wanted. Had some such rigid self-examination been applied by all members of the profession there would be no need of saying anything about professional etiquette, but, unfortunately, too many architects seem to forget that the fact of his being an architect does not in the least absolve him from the responsibility of, at all times, at least appearing a gentleman, and most of all in our professional relations to other architects. In our dealings with clients and society in general, we are not often led to err in this respect, knowing that if we do we will speedily be taken to task for our conduct, but among ourselves the facts are that not a few do often exhibit traits which indicate a very great deficiency in this really quite essential element for the make up of an architect. We may to outsiders appear to be perfect gentlemen in our intercourse with one another—it is, nevertheless, sadly true that behind this convenient exterior, gentleman, there frequently lies a weapon full charged with the most virulent and debased elements of professional practice which does deadly work when fired and would surely cause the sender to suffer untold pangs of remorse if he were not completely dead to such feelings. Most of us have had some experience in coming in contact with this class of architects. Happy are they who have yet to make their acquaintance. It may be true that "all is fair in love and war," but even these two antagonistic forces, which appeal so strongly to the passions of men, should be allowed to warp us into the use of degrading means to accomplish an end. As an instance of what may be considered a breach of professional etiquette, we will suppose a case taken from actual facts. An architect has been asked by a building committee to submit sketches for a building in order to give the architect a better knowledge of the requirements necessary to incorporate in his plans. The committee take him with them to visit buildings designed for a similar purpose in a distant city. After finding out what is wanted he goes to work in good faith, feeling that his work is sure and he has only to give his best efforts to the work; but he awakes one morning to find the devil has been assiduously at work against him. His majesty has, by a gradual ascent in the scale of diabolical improvement, deigned to assume the garb of an architect, and makes a professional call on the building committee. He is told by the unsuspecting committee that an architect has already been employed. The devil, otherwise the architect pro tem, finding there is no possible means of having himself employed, at once proceeds to take the committee and set them on the pinnacle of his architectural fame and show them all the glories of his devilish creation, and promises to make them a gift of plans for the proposed building if they will only fall down and worship him by giving him the work. The architect already employed is held up to the derision of the committee as a young man with so little experience that it would be a criminal folly for them to trust their work to him. The scheme works. On the appointed day the committee examine the plans of their selected architect—they are found to be a fair interpretation of the requirements of the committee,—and are simple, straightforward sketches, as was asked for. The architect pro tem is then announced; he appears with a flourish of trumpets, and in full satanic robes. The drawings, resplendent in vermilion and elegant draftsmanship, are thrown open to the view of the astonished committee. With an air of there, gentlemen, that is what you want, and in an aside, "that is what you shall have." Numerous of splendid, grand, magnificent, just the thing, etc., etc., *ad nauseam* are poured forth by this architectural fiend till the committee are thoroughly exhausted, and finally succumb to a man, and they are all honorable men. The work of the other architect is done, the drawings rolled up and the hand that has drawn them lays them away. The world wags on as usual, one young architect's hopes blighted, nothing more. So the scene ends, as far as the public and committee are concerned, and just here, gentlemen of this convention, is where we who desire the advancement of our profession, and wish above all other considerations that its practitioners shall be honest in their dealings with clients, contractors and their professional brethren, here we should put our foot down decidedly, and say to a member of this association who is guilty of unprofessional practice, we consider ourselves an association of gentlemen, as well as architects, and unless you can carry on your business under this simple restriction, you must cease to be one of us, for we cannot consent to any individual member degrading himself to secure work, and the sooner you realize this fact the better it will be for you and the profession. Gentlemen, this is only one of many similar cases, that most of us, unfortunately, have to deal with. At the January meeting of this association, the subject of professional practice was referred to the board of management, with power to act. We have been quite fortunate so far, that not a single case of unprofessional conduct has been reported so far as the writer knows. Truly this is commendable, and may it ever be thus, but when they do occur may we not expect the board to act with prompt decision? With the assurance that they will, we will leave this subject for the present.

The following report of the committee on professional practice was presented by Mr. Taylor:

REPORT OF COMMITTEE ON PROFESSIONAL PRACTICE.

Gentlemen.—Your committee appointed at the last convention and continued with instructions to report at this time a code regulating professional practice among members, submit the following:

That each member secure the publication of this code in his own neighborhood, to the end that the public may be familiar with the same.

Since it should always be borne in mind that the number of architects to the square mile is very few (in this state about 3,000 square miles to the architect), and that, therefore, the closest harmony is necessary. And remembering the words of Shakespeare, "To thine own self be true and it must follow as the night the day, thou canst not then be false to any man," we move the adoption of the following:

Resolved, (1) That we deem it unadvisable and unremunerative to compete for private work.

(2) That the soliciting of work and offering to perform services when it is known that the person whose clientele is sought has professional relations with a fellow-architect is ungentlemanly and unbecoming an honest man.

(3) That the offer to perform services for a lower figure than the customary rate, to get a client from a fellow-architect, is beneath the dignity of any architect, and any member of this association proven guilty of such conduct shall be suspended.

(4) That speaking disparagingly of the works or abilities of a fellow-architect in the presence of or to contractors or builders is to be deplored and should be discouraged.

(5) That unfriendly criticism of a fellow-architect to or in the presence of his client or prospective client is disreputable and beneath the dignity of an honest man.
(6) That each fellow should befriend his associates professionally whenever possible, and lend assistance when necessary.
Respectfully submitted.

C. H. LEE,
E. H. TAYLOR, } Committee.

On motion, the report was read and passed upon by sections.

Final action was taken, on motion of Mr. Lee, that the preamble and resolutions be adopted as a whole, and form part of the records of the association.

The following report was presented and accepted:

REPORT OF THE COMMITTEE ON THE PRESIDENT'S RECOMMENDATIONS.

The committee to report on the recommendations in the president's address have carefully considered the subjects there mentioned, and would recommend action on the following subjects:

Resolutions of respect and regret on the death of our fellow associate, Mr. W. W. Sanborn, of Clinton.

To appoint a committee of three to report a method of procedure on the competition code, such report to be submitted at the next annual meeting.

The committee find that other matters in the president's report which require special action have already been disposed of.

E. S. HAMMATT,
F. D. HYDE, } Committee.

President Josselyn announced the following committees:

W. L. Plack and J. S. Blake, of Des Moines, on party walls.

F. G. Clausen and E. S. Hammatt, of Davenport, on lien laws.

F. D. Hyde, W. F. Hackney, and W. A. Fulkerson, on presenting code on competitions.

The following resolution was offered by Mr. Hammatt:

Resolved, That no contractor who furnishes architectural plans shall be allowed to figure on work in the offices of members of the association.

On motion, the resolution was referred to a committee of three, appointed by the president. The committee appointed are, E. S. Hammatt, E. H. Taylor, and J. S. Blake, who are to report at the January meeting.

Mr. Hammatt introduced resolutions on the death of Mr. W. W. Sanborn, of Clinton, Iowa, and, on the suggestion of Mr. Josselyn, it was decided that Mr. Hyde should prepare a short eulogy on the life of the deceased member, to be presented at the next semi-annual meeting.

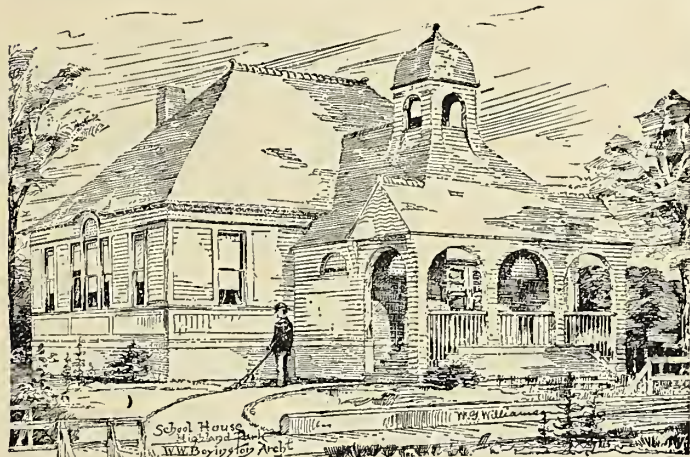
Mr. Clausen moved that the next meeting be held at Cedar Rapids.

After a long discussion, in which Mr. Hyde strongly advocated that one meeting should be held annually in Des Moines, thus giving the association and its records, books, etc., a permanent home, he motioned that the next meeting be held in Des Moines. The motion was adopted, the Des Moines members present, Messrs. Lee and Plack, voting against the motion, although not objecting to any obligations involved.

Mr. Plack tendered a vote of thanks to the resident architects for courtesies received.

Mr. Lee read letters of regret at not having been able to attend the meeting, from Wm. Ward, of Council Bluffs, and Fred Heer, of Dubuque.

Mr. Taylor read a paper on the subject of "Domestic Architecture," which will be published in a future number. On motion of Mr. Clausen, the convention adjourned *sine die*.



Synopsis of Building News.

Algona, Ia.—Architect C. H. Lee, of Des Moines, is erecting three business houses here; cost \$20,000.

Canon City, Col.—Architect George W. Roe reports: For Tremont County, three-story brick and stone court house, 61 by 72 feet, tin roof, clock tower, 82 feet high; cost \$20,000; under way; Roe & Sell, builders. For D. G. Peabody, three-story apartment building, 45 by 88 feet, brick and stone; cost \$10,000; Geo. W. Roe, builder.

Chicago, Ill.—As the fall season draws near, the prospects for the building trade brighten. Since May 1 architects, builders and material dealers have expressed grave doubts as to the complete revival of the building interests. In the past few weeks, however, work enough has been placed in the hands of the architects to insure a fall business of much more than ordinary magnitude. In regard to the situation, a prominent material dealer and member of the Builders and Traders' Exchange says: "I am sure that the amount of building that will be done this fall will exceed the fall business of any of the past ten years." A prominent architect says: "Notwithstanding the seeming dullness my business thus far this year exceeds, by one-half, that of the same period of 1885, and prospects for fall building are exceedingly bright." It is possible that later in the season there may be a scarcity of brick, for although the brick yards have been running all the season, the manufacture has not far exceeded the demand. Bricklayers are in demand at 45 cents per hour, eight hours work. Many who left the city about May 1 are now returning. Should the trouble in Cincinnati continue, there is no fear that we will suffer from the scarcity of bricklayers. From the present outlook it is fair to predict that the business of the next few months will be such that the gross amount of building for the year will not fall far short of that of 1885, if indeed it does not exceed.

Architect Alfred Smith reports: For A. A. & O. S. A. Sprague, a three-story store and flat building, corner of Sebor and Desplaines streets. Six stores on Desplaines street are 20 by 41 feet, each with basement and flats above. Seven flats on Sebor street are 25 by 44 feet, felt roof, galvanized iron cornice, closets and bath, wood mantels, stable in rear, 56 by 128 feet; cost of whole improvement, \$60,000; to be commenced at once. For C. H. Jordan, three-story brick store and flats, 24 by 65 feet, on Madison, near Page street, brick, copper cornices, felt roof, skylights, stained glass, wood mantels, etc.; cost, \$12,000; to be commenced at once. For same, two two-story

and basement flats, 48 by 70 feet, Warren avenue and Leavitt street, rock-faced stone fronts, felt roof, closets and bath, stained glass, skylights, hot air heat, pneumatic bells, speaking tubes, wood mantels; cost, \$14,000; to be commenced at once.

Architects McAfee & Lively report: For J. W. Brown, three-story store and flat building, to be erected at 4234 Cottage Grove avenue; cost, \$5,000; taking figures. For Mrs. Farnam, frame cottage at Woodlawn; cost, \$2,500. For Lincoln Ice Co., double dwellings to be built, corner of Bissell street and Belden avenue; cost, about \$9,000; plans in preparation. For Andrew Burnham, double residence, at 2731 Calumet avenue, Milwaukee pressed brick and buff terra-cotta will be used; estimated cost, \$10,000; plans in preparation.

Architect H. R. Wilson reports: For Henry Van Schaack, ten two-story houses, 200 by 40 feet, Forty-third street and Lawrence avenue, pressed brick, stone and terra-cotta trimmings, galvanized iron cornice, felt roof, skylights, stained glass, closets and bath, hot air heat, hardwood finish, electric bells, wood mantels, speaking tubes; cost, \$30,000; under way.

Architect J. H. Carpenter reports: For Thomas Collins, four-story and basement hotel building, 31 by 100 feet, corner Canal and Adams streets, brick, stone trimmings, galvanized iron cornice, composition roof, closets, electric bells, elevator, etc.; sixty rooms; cost \$25,000; to be commenced at once.

Architect William H. Drake reports: For O. D. Wetherell, four-story factory building, 35 by 110 feet, Archer avenue and Quarry street; under way; Tobin & Raycraft, masons; Peter Kauff, carpenter.

Architect J. J. Flanders reports: For Berner & O'Brien, two two-story houses, 50 by 70 feet, on Bellevue place, near State street, Anderson pressed brick, brownstone trimmings, galvanized iron cornices, skylights, closets and bath, stained glass, hardwood finish, electric bells, speaking tubes, dumb waiters, etc.; cost \$30,000.

Cincinnati, Ohio.—Reported by Mr. L. Mendenhall. What promised to be a moderately busy fall has, owing to the foolish stand taken by the hod-carriers and bricklayers in refusing to work where non-union labor was employed, proved quite the contrary. Most of the contractors were in hopes that they could recover, in a measure at least, from the losses inflicted by the eight hours' agitation. The article found elsewhere fully explains the situation, without any further enlargement, except that one or two boss contractors employing union labor have resumed work, and I am afraid, with all due deference, to the injury of not only this fall's, but next spring's trade. However, let us hope for the best, and remember most clouds have silver linings.

The following dissolutions have taken place: Des Jardins & Hayward, Mr. Hayward retiring. Smith & Forbush, Mr. Oliver Smith retiring, and accepting a lucrative position with Burnham & Root, of Chicago. Mr. E. Buddemeyer has formed a partnership with Messrs. Plympton & Trowbridge.

Architectural news is scarce this month, owing to the strikes mentioned, and I can only report the following:

Architect Lonsdale Green reports the following work under way at present: Frame residence for Mrs. M. J. Pyle, College Hill, Ohio; cost \$4,000. Frame residence for Dr. W. Collins, College Hill, Ohio; cost \$2,500. Frame residence for George Koehler, Avondale, Ohio; cost \$5,917. Large stable for H. W. Taylor, College Hill, Ohio; cost \$2,000. Also "African" church, to seat 200, for College Hill and Mt. Healthy. Sketching for one or two jobs; prospects are for not much more work this season.

Theo. Richter, Jr., reports: For John A. Pendleton, frame dwelling, six rooms, with modern improvements and slate roof; cost \$5,500. For A. Squire, frame dwelling, ten rooms, with improvements, slate roof; cost \$6,200. For T. W. Kallmeyer, brick dwelling, eight rooms, slate roof; cost \$6,000. For A. Morrison, brick house of eleven rooms, slate roof; cost \$5,000.

Dallas, Tex.—Architects Bristol & Clark report the following as the most important work now in their office. For Jeff. Ward, Jr., frame dwelling, nine rooms; cost \$5,500; under way; McIntosh & Morrison, builders. For Mrs. A. E. Randall, brick veneered residence, slate roof, ten rooms; cost \$7,000; under roof; Valentine Werner, builder. For Sigmond Loch, eight-room, frame dwelling; cost \$4,750; nearly completed; McIntosh & Morrison, builders. For J. M. Dickson, frame residence, eight rooms; cost \$7,600; under way; John Beattie, builder. For Mrs. M. A. Morrell, brick residence, slate roof, iron cornice, ten rooms; cost \$12,500; under way; McIntosh & Morrison, builders. For W. C. Howard, frame dwelling, eleven rooms; cost \$9,100; under way; Valentine Werner, builder. For G. H. Turner, frame dwelling; cost \$3,500; under roof; N. Walters, builder. For W. N. Crawford, frame dwelling; cost \$2,800; under way; McIntosh & Morrison, builders. For L. Michnell, M. D., frame dwelling; cost \$4,000; under way; W. Richardson, builder. For Blankenship & Blake, four-story brick, wholesale building, 200 by 75 feet, iron and plate-glass front, gravel roof, galvanized iron cornice, stone trimmings, steam heating; cost \$62,500; completed; P. J. Butler, mason, McIntosh & Morrison, carpenters.

Des Moines, Ia.—Architect C. H. Lee reports: For T. Earley, frame residence; cost \$7,500. For W. L. Reed, frame residence; cost \$5,500. For J. O. Freberg, frame residence; cost \$2,000.

Goshen, Ind.—Architect M. F. Isbell reports: For Brooks & Bartholomew, two-story store building, 22 by 85 feet; cost \$4,500.

A two-story school building, to cost \$6,000, is being built from plans of Architects D. W. Gibbs & Co., of Toledo, Ohio; H. Stootman, builder.

The English Lutherans are building a church, 30 by 40 feet; to cost \$4,800; after plans of Architect Cass Chapman, of Chicago, Ill.; M. F. Isbell, builder.

Messrs. Schrock & Smith are building two two-story stores, 20 by 66 feet; cost \$4,000.

Grand Rapids, Mich.—Architect D. S. Hopkins reports: For J. H. Wonderly, addition of three stories to building; cost \$17,000; projected. For J. W. Moon, of Muskegon, a block of eight stores, two-story brick, now being built in Nebraska; cost \$38,000. A block of six tenements at Muskegon for W. H. Stubbings, of Evanston, Ill.; now under way; cost \$18,000. Fireproof vaults for Muskegon county, Mich.; cost \$12,000; plans completed. Also thirty-eight frame dwellings in various sections of the country, ranging from \$1,600 to \$5,000, and aggregating \$116,400, nearly all of which are under way.

Mosaics.

ONE of the best designed and built railway depots in the country is that of the Michigan Central Railroad at Detroit. Cyrus L. W. Eidlitz was the architect, and his effort seems to have been to express in the building the reliability, substantiality, and intelligent attention to the wants of the traveling public for which the Michigan Central Railroad is so favorably known.

To facilitate the wishes of eastern friends who desire to acquaint themselves with the vast productive capacities of the West, the management of the Chicago Rock Island & Pacific Railway announces that tickets will be sold on September 8 and 22, 1886, to principal points in Minnesota, Dakota, Missouri, Kansas and Nebraska at greatly reduced rates, and with stop-over privileges. For further information apply to nearest ticket agent, or to E. A. Holbrook, General Ticket and Passenger Agent, C. R. I. & P. Ry., Chicago, Illinois.

THE fourteenth consecutive annual exposition of the Inter-State Industrial Exposition of Chicago will be held, commencing Wednesday, September 1, at 8 P.M., and closing 11 P.M., Saturday, October 16, 1886. It will be open to the public daily, Sundays excepted, from 8 A.M. to 10 P.M. Thirteen years of uninterrupted success, without the shadow of failure, and an attendance of visitors steadily increasing, have made it the great American inter-state exposition. As such it justly challenges the attention of all producers, whatever the line of their labors, whether industry, art or science, who desire to present their products to the most active, enterprising and intelligent body of people in the world, and at the least possible cost to themselves. The exhibits this year promise to be even more varied and interesting than usual. The experiment of last year, of giving up the art gallery largely to showing the best work of American artists, was so satisfactory that it will be repeated this year.

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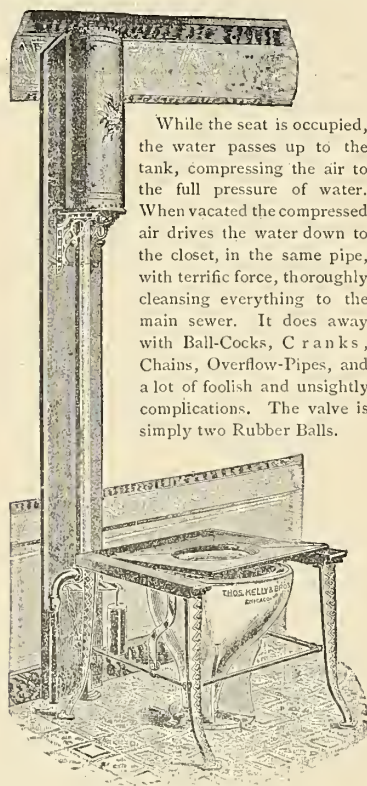
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While the seat is occupied,
the water passes up to the
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the full pressure of water.
When vacated the compressed
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main sewer. It does away
with Ball-Cocks, C r a n k s ,
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a lot of foolish and unsightly
complications. The valve is
simply two Rubber Balls.

FIG. 3.

THOS. KELLY & BROS.,

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PROPOSALS.

NOTICE TO BUILDERS.

Bids will be received until 12 o'clock noon, September 5,
for a number of brick buildings, to cost about \$75,000, to
be erected this season in Kansas City, Missouri. Plans and
specifications can be seen at our office from August 26 to
day of letting. Address

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PROPOSALS.

STEAM-HEATING, PLUMBING, LIGHTING, ETC.

[Near Quincy, Ill.

QUINCY, ILL., July 30, 1886.

The Trustees of the Illinois Soldiers' and Sailors' Home invite sealed proposals for boilers, steam-heating, plumbing,
gas-fitting, steam engine and electric lighting required at the Home near Quincy.

Plans and specifications for the work may be examined at the office of the Trustees on the Home grounds, or at the
office of S. M. Randolph, architect, No. 51 Lakeside Building, Chicago, from August 1 until August 30, inclusive.

Further information may be obtained at either of these offices. Bids may be made for the whole or any part of the
work, and must be on blanks, which will be furnished, and accompanied by bond in the sum of \$10,000.

Said bids to be addressed to L. W. Shepherd, Secretary I. S. and S. Home, Quincy, Ill.

Blank form of proposal and bond will be furnished by the Secretary on application.

Bids will be opened at office on Home grounds August 31 next, at 2 P.M.

The right is reserved to reject any and all proposals.

DANIEL DUSTIN,
L. T. DICKASON,
J. G. ROWLAND, Trustees.

SOLDIERS' AND SAILORS' MONU- MENT.

[At Columbus, O.

Designs for a soldiers', sailors' and marines' monument
to be erected in Green Lawn Cemetery, at Columbus, O.
(cost not to exceed nine thousand dollars), will be received
at the office of the County Commissioners of Franklin
county, Ohio, until 12 o'clock, noon, Wednesday, Septem-
ber 22, 1886.

All designs submitted shall be accompanied by full detail
drawings and working plans, showing the exact manner
of construction and inscriptions, and the ornaments, and
also with full specifications designating all the different
kinds of materials to be used, the exact method of construc-
tion, with probable cost. All drawing must be made on a
scale of one-and-one-half inch to the foot, each design to be
represented by perspective (or elevation) with plan, and, if
necessary, sections on smaller scale. Each design to be
signed by a motto, and the author's name forwarded under
seal. The successful designer will be paid three per cent
on contract price of monument for his designs, drawings,
specifications and working plans, if let within his estimate.
The lot on which the monument is to be erected is oblong,
50' by 100' in size. Board reserve the right to reject any or
all designs.

By order of the Joint Board on Monument.

J. M. BRIGGS, President.

D. M. BEELSFORD, Secretary.

PROPOSALS.

The Board of State House Commissioners for the State of
Kansas will receive competitive plans for the completion of
the central portion of the State house at Topeka, Kansas,
at their office in Capitol square, Topeka, Kansas, on the
fourth day of January, 1887, at 4 o'clock p.m.; said plans
to consist of first, second and mezzanine floor plans, south
and east elevations and transverse and longitudinal sections,
all to a scale of eight feet to an inch, size of plan to be gov-
erned by plans of basement story, already adopted, to be
seen at the office of the Board, style of architecture to be in
harmony with the wings already built.

The Board of State House Commissioners will employ
such skilled assistants as they may deem advisable to sit
with them as an awarding committee. The Board of Com-
missioners will pay \$3,000 for the best plans submitted and
\$1,500 for the second best, the plans for which premiums are
awarded will become the property of the State of Kansas,
with the right to use the whole or any part or any modifica-
tion thereof without further claim from the authors for
compensation or employment. Carefully prepared estimates
of the cost of erecting and finishing the building will be
required to accompany each plan submitted.

The Board reserve the right to reject any and all plans
submitted.

By order of the Board of State House Commissioners of
the State of Kansas,

E. B. ALLEN, Secretary of the Board.

THE INLAND ARCHITECT AND BUILDER.

Vol. VIII.

No. 3

SEPTEMBER, 1886.

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IN THE WEST.

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(A NATIONAL ORGANIZATION.)

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A COMMITTEE of three of the Illinois State Association of Architects to take steps toward the entertainment of the architects attending the convention of the Western Association in November next, was appointed at the August meeting of the Illinois Association. The arrangements are, of course, not as yet completed, but if the success of the coming convention should be with the entertaining architects, this is already assured. No architect should think for a moment that his presence is not needed at this convention, and the benefits each visitor will derive cannot be computed in dollars and cents, the rapid growth of Chicago, and its importance from an architectural standpoint, making a few days' visit of the greatest value to the architect. The often-expressed opinion of members of the profession, that Chicago presents a more varied architecture than New York, should be one of the inducements to eastern architects to make this a visit of comparison, and in the convention none will be more heartily welcomed than architects from east of the Alleghanies. Preparations should be made, even now, by each individual architect in the United States, to leave his business the third week in November and attend this convention at Chicago.

THE annual convention of French architects under the auspices of the Société Centrale of Paris, was held in that city in the Ecole des Beaux Arts on the 7th to the 12th, inclusive, of last June. Several foreign architects of distinction were present. The programme was full and interesting, especially to American architects, as showing how our French confrères make their conventions profitable. There were essays as follows: on religious architecture, by M. Gosset, architect from Rheims; on the architectural exhibition at the Paris salon in 1866, by M. Moyaux, government architect; on the transactions of the late convention of learned societies, by M. Charles Lucas; on the unity of art, by M. Guillaume; on Chaldean architecture, by M. Henzey, and on the individual rights of ownership in artistic designs. There were also two biographical memoirs, one on the life and works of M. Th. Ballu, architect, and member of the Institute of France, and one on the life and works of the late M. Th. Labrousse, one of the most distinguished of French architects.

BESIDE the papers above noted and the resulting discussions, there were numerous excursions. One was to the new Jewish synagogue in the Rue de la Victoire, where the accomplished architect, M. Aldrophe, met the visitors and entertained them with an instructive exposition of the uses of the various parts of the structure. Another excursion was to an establishment, where decoration by mosaic is taught and practiced under government control; another to the new city hall and the old abbey church of St. Denis; another to a pavilion in the Louvre, where mosaic decoration was in progress; another to the new buildings of the Sorbonne; yet another to the Pantheon, and finally a Cimmerian promenade through a portion of the catacombs which underlie portions of Paris. Other subjects announced for discussion, but of which no detailed account appears, were the following: public competitions, architects' commissions (honoraires), sanitation, building industries or trades, architects' responsibilities, and their ownership of designs. It will be seen that many of these are precisely the same topics which command the attention of American architects today. One afternoon was

devoted to the mutual defense league, recently established for the purpose of assisting architects who are obliged to resort to litigation for self-protection against dishonest or unreasonable clients. This matter in particular seems worthy of consideration at the approaching conventions of the American Institute and the Western Association, and it is to be hoped that some reader will make a note of it and bring it up at the first opportunity.

IN view of the wholesale destruction of property, coupled with loss of life, wrought by the recent earthquake at Charleston, South Carolina, the movement of which was felt from the Atlantic to the Mississippi, it seems proper to raise the question whether we are to assume that a recurrence of the calamity is improbable, or are to adopt a method of construction in our larger buildings which will withstand similar strain. The Mexican and South American states are frequent sufferers from this cause, the Pacific coast is subject to shocks of greater or less severity; and, though Charleston has not experienced a severe shock since 1811, it is not at all improbable that a like disaster may occur within the next twenty years. It would certainly be the part of wisdom for the city of Charleston, while reconstructing her shattered buildings, to seek a measurable security from future demolition, at the expense of an increased expenditure in construction. The havoc that would be worked in any of our northern cities by a similar shock may well be imagined by one familiar with the method frequently employed in the erection of structures for commercial and manufacturing purposes. To place a roof on four walls of brick or stone, built to a height of from three to eight stories, without cross walls and lateral bracing in exterior walls, is an invitation to ruin by earthquake or by fire. If Americans are building for the pleasure of seeing their work tumble in before fire or earthquake, too many have hit on the proper construction to insure this result. If we are building that our work may outlast this generation and the ones thereafter, we need to inaugurate a new era, in which the skin-builder shall starve for the lack of a job. It may be fairly questioned whether the ultimate expenditure of capital is greater for good work than for bad; but in Charleston, at least, the earthquake has gained the right to be taken account of in the construction of a good building.

IS there any form of building that is safe against an earthquake shock? Against the severest possible shock, none. Against such shocks as are often felt in Italy and Greece, and are matter of course in Spain and parts of South America, being oftentimes more severe than that which demolished Charleston, safe constructions may be provided and are found in almost every structure in Spain, whether large or small. Moreover, these constructions are largely fireproof or readily lend themselves to fireproofing. The first method is by vaulting, that is, by a massive brick or stone construction which offers the resistance of a solid cube. The objections to this method are on the score of expense and of room, the latter being conclusive in any large American city. The other method, commonly employed in modern Spanish buildings, is a brick or stone construction, with cross walls at proper distances, all walls, both exterior and interior, being braced and cross braced with timber or iron. The general character of this construction was described in an article by Mr. Irving K. Pond, entitled "Houses and Streets in Spanish Cities," published in *THE INLAND ARCHITECT* for March, 1885. For the benefit of subsequent subscribers we make the following quotations: "There was a tendency, from the very first days of Spanish building, to treat the wall, not as a

homogeneous mass of masonry or brickwork, but rather as a frame filled in, as to its spaces, with some earthy material, such as mud, clay or brick. The reason for this treatment is probably found in the frequent occurrence of severe shocks of earthquake, which would easily demolish a tall, light wall, laid up in the ordinary manner, so that to get the required lightness and stiffness, framing was resorted to. * * * In some cities rolled iron beams are used for the frame, though generally timber frames are the more common. Even minor partitions are constructed in this way, so that it is not uncommon to see the frame complete to the height of three or four stories, before the masonry has been carried above the foundation, a complete skeleton of a house in which every space not destined to be filled by either a window or a door, is crossed by heavy diagonal braces. In the end all woodwork of the construction is imbedded out of sight in a fire-resisting material." The frame construction of Dutch houses lends itself to the same treatment, and may be made at once firm and strong and architectural in feeling. We shall welcome the day when owners give to architects and builders the opportunity to erect buildings which shall be permanent as well as convenient and artistic.

AN excellent opportunity for Ohio architects to carry out a resolution, made at the last meeting of the Association of Ohio architects, is presented by the following, which is sent us by a Cleveland architect, who says: "It is not much of a curiosity, being evidently based on the old idea that 'All fools are not yet dead,' and that architects are likely to furnish some living examples." It is as follows:

CLERK'S OFFICE, BOARD OF EDUCATION,
CLEVELAND, August 17, 1886.

Dear Sir,—The following resolution was adopted by the Board of Education, Monday, August 16, 1886, by Mr. Gunzenhauser:

Resolved, That the committee on buildings be, and they are hereby authorized and directed to procure, in any manner they may deem the most expedient, provided no cost be incurred, plans for school buildings. Said plans to be for both an eight and twelve-room building, containing all the requisite space for the proper seating of the required number of pupils, sufficiently lighted, heated, and ventilated, and be accompanied by a detailed estimate of the cost of the erection of the same, and when said plans are obtained, to present the same to this board for inspection.

The plans shall consist of basement, first and second story and a front and side elevation, to a uniform scale of $\frac{1}{2}$ inch to one foot; elevations to be without shading or coloring and plans colored only to illustrate material used.

The plans to be directed to the chairman of the committee on buildings and be sent to this office on or before Monday, September 6, 1886.

THOS. R. WHITEHEAD, Clerk.

As architects, whether members of national or state associations, will generally answer this invitation by silence, or by sending a copy of the Western Association competition code, these educational gentlemen will probably be obliged to consult the best interests of the public and secure an architect of standing to furnish the desired plans.

OF course, we do not believe that the Cleveland board of education intend its committee on buildings to take its command "*to procure plans in any manner most expedient, provided no cost be incurred*," in its literal sense, and in case of failure otherwise to proceed to burglarize the offices of Ohio architects. Though this seems like another way of saying "Get money honestly, John, but get money," it cannot be what is meant. An educational board should be sufficiently intelligent to say what they really mean in so important a resolution as this, though the mistake might be excusable with the commissioners of "Posey county"; but they evidently only have in mind that they want to get a good selection of drawings for some carpenter to work up a plan from, and that they shall get them for nothing. We have in the past mildly censured county and state commissioners for issuing like "invitations," feeling that their error was one of ignorance rather than of intent; but we cannot allow this excuse to obtain with the board of education of one of the most intelligent and advanced cities of the Union. If ignorance

be their excuse, the public should see that the future health and well-being of their children is in rather dangerous hands, for none should know so well as a board like this that a school building erected by the most proficient architect is none too healthy or well constructed for the safety and comfort of children.

ARTESIAN wells have in them sometimes an element of danger, as has been recently illustrated by an occurrence at Belle Plaine, Iowa. In this town several wells had been bored, and water reached unusually near the surface, about 250 feet, with a surface pressure of eighteen to twenty-five pounds to the square inch. Finally a well was bored at the intersection of two streets, and at fifty feet nearer the surface water was reached. The bore was two inch, the contractor believing the flow of water would increase it to three inches. While forcing the three-inch casing into the bore, the water forced itself upward outside the casing, rapidly increasing the aperture and the torrent becoming unmanageable, soon a stream a foot in diameter was pouring out, which, in a night, increased to three feet, the water rising four feet above the surface and spreading in every direction. The wells in other parts of the town had by this time ceased flowing. A force of men was immediately employed in providing channels for the overflow and walling in the aperture with heavy planks. The stratum was largely sand to a depth of sixty feet where a strata of blue clay was reached. Engineers were engaged who first inserted a fifteen-inch casing to a depth of eighty feet, when the supply of tubing gave out and the tube gradually sank sixty feet further. Then a three-inch tube, with a cone of cording twelve inches in diameter, was sunk through the tube already inserted, but without success. Then a five-inch casing with a heavy iron cone, twenty feet long and a diameter of thirty inches was sunk with a two-inch tube, which reached bottom at two hundred and ten feet as a guide. This cone weighed over a ton; they were unable to insert over sixty-two feet, and it is supposed to have struck the top of the fifteen-inch casing. At this writing the well still continues to flow. By sinking a casing the same size as the bore, and immediately with it, the chances of such an occurrence would be reduced to a minimum.

L*A Semaine des Constructeurs* mentions a radical change in the method of distributing prizes in architectural competitions, which has been suggested by the Central Architectural Society of Belgium, and is so fair and reasonable on its face that it seems strange that no one thought of it sooner. It relates to the usually considerable difference between the first premiums and the inferior ones, whereby the recipients of the second, third and lower prizes, whose designs are often but very slightly inferior in merit to that which the vote of the jury has placed highest, are so much more inadequately compensated for their services. For example, the first prize may be \$1,000, the second \$700, the third \$400, and fourth \$200. It is very likely to happen that the designs adjudged second and third, and perhaps fourth, may be so nearly equal in merit to that placed first, that the decision depends on a bare majority vote, which itself likely enough turns on some personal whim or some misunderstanding of the drawings or some other irrelevant matter. Indeed, it is often very possible that a change of a member or two on the committee would have resulted in quite a different award all round. Plainly, under such circumstances, it is most unjust to these almost successful competitors, that, besides the chagrin and loss attending a disappointment where they have come so near winning, they should be discriminated against by compensa-

tion at a rate so far below that of the best man, as the world calls him, but often, in fact, no whit better than half a dozen of the rest.

THE Belgian Society of Architects proposes to relieve competitors of this injustice, by leaving the jury free to apportion the various awards strictly according to the merits of the designs as adjudged by them. The precise amounts of the first prize, second prize, etc., are not to be prescribed in advance therefor, but only the aggregate of them all, the total sum which is to be distributed among a certain number of premiated competitors. These will share in it proportionally to the credits awarded their work, which, it is expected, will be estimated by some equitable system of marks to be determined by the jury. On this plan, if the design placed first should receive ninety-five marks, the next ninety, the third eighty-five and the fourth eighty, and there were to be but four premiums, each competitor would receive an equitably proportioned share of the prize fund. Supposing, for example, that the total sum to be distributed in premiums were \$7,000, the first design would be awarded \$1,900, the second \$1,800, the third \$1,700 and the fourth \$1,600. It is difficult to see what objection can be brought to this proposition of the Belgian architects. It appears, at a glance, so transparently just and fair to all parties concerned as to merit the instant assent of all parties interested in architectural competitions as soon as it is laid before them.

THE annual exhibit of paintings of the Inter-State Industrial Exposition at Chicago this season is devoted entirely to American work. A change of management has occurred, and this year the exhibit is under the directorship of Mr. William H. Beard, the famous animal painter. Mr. Beard's fitness for this position is peculiarly fortunate, as beside his fame as an artist and art critic he has a wide acquaintance among his fellow artists, who have the utmost confidence in his ability and fairness. Wedded to no particular school, Mr. Beard has presented a largely varied collection of paintings, and all with some claim to merit. In this connection we would suggest that next year a group of architectural effects in water colors, by architects, would be both interesting and instructive. A selection from those exhibited at the convention of the Western Association of Architects in November next could doubtless be secured for this purpose.

TO point out where the builders' exchanges could be made more valuable to members and public alike, and especially to architects, we would strongly recommend the establishment of well conducted and comprehensive exhibits of building materials and appliances. As we visit the cities of the West we find some such established, but, almost without exception, in the hands of private parties, often at a distance from the builders' meeting places, and partaking of the character of a museum with high rates charged for the admission of exhibits. This should not be. In the hands of a reliable exchange perfect operation can be assured, and all manufacturers would willingly send samples of their wares upon application and make no objection to paying part, or even the whole, net cost of the proportion of the floor space occupied by them. It would be a mistake for an exchange to expect to make a revenue from such an exhibit, and such a display of material, always ready for the inspection and comparison of members, and accessible to architects, is in itself of sufficient value to them to warrant their assuming the entire expense were this necessary.

Walls Crumble and Decay.

BY J. FREDERIC ELSOM.*

VIEWED in the light of the reports of advertised experts, the average reader is led to conclude that the so-called disintegrating processes of nature will have much to account for when genius on his rambles discovers and makes plain the precise reasons for this early crumbling and decay of our modern architectural achievements of which the secular press is replete, for it is becoming fearfully common to read of these fearful disasters, and hundreds mourning for hundreds slain. That there are ultimate causes for this state of affairs is patent to all who have been called upon to mourn the losses or count their dead.

In a previous article on foundations, I called attention to some of the modern improvements in the materials and appliances used in this important part of building, but the trouble does not begin or end here as many know to their cost. When the use of lime, water and sand was first introduced as a cement to hold building materials together, chemistry had not clearly defined the silicate of lime and the like, that architects of that age might understand. Now, however, there is no mistaking what is needed and the chemical principles involved in these combinations; but with all the hurry, bustle and rapid transit of this marvelous nineteenth century chemical reactions and combinations are eventually the same as when discovered centuries ago, hence it is not to be expected that the desired reaction of lime, water, etc., can ensue in a few moments when chemistry teaches us that the silicate of lime cannot be formed with these three crude elements in less than thirty-six hours, then when we mix our mortar and apply at once can it be expected that this combination will ensue? No, a thousand times no, as much pertinency in reasoning that mud from the roadside will, by drying, make good mortar, which it will, in fact, equal, if it is not superior, to the stuff used in large quantities in many a large building creeping skyward so rapidly while I write.

Again, the condition of other material to be held together and supported by this mortar is often such as to augment rather than lessen this evil; the brick and stone are drawn to the site, allowed to dry and season for days, weeks, and perhaps months, before being placed in the wall; then this mortar, of itself only in a transitory state, is brought in contact, and the desired chemical reaction changed instantaneously.

To prove the reasonableness and efficacy of my theory, if such it may be called, take a sample of mortar, thoroughly dried, if you please, in a wall, or, what is better, from a wall that has given away prematurely; subject this to pressure, and my word for it, the result will be far short of the standard of the silicate of lime. It should be borne in mind that the mortar, besides being merely a holder together of the brick or stone, must of itself bear its own proportion of the superincumbent weight, and the instant it fails to bear this burden the entire wall, if made of the hardest granite, is weak in proportion. If one part of a structure will bear five hundred pounds of pressure to the square inch, all the rest of the material is good for this, and not a fraction more, on the same hypothesis that one weak piece in a structure makes a weak structure, no matter how good and strong the rest may be.

Notwithstanding all this, however, there are many actual natural causes which tend to the rapid crumbling and decay of mineral walls; some more active in the larger cities, while others find better fields for action in the buildings of smaller towns and rural manufactories; among these may be mentioned the seasoning of material, allusion to which was made in the foregoing. With the stone of this country, we invariably find they decrease in weight with age, and with some varieties I have found the combined moisture to be the same before and after this change, hence we must look to other volatile matters for this decrease. Of course I cannot in an article of this kind call attention to the various stone used for building purposes, but having a sample of oolite now in tow for a laboratory test I will give the results.

This variety of building stone is made up of the silicious remains of a low order of animal life and pure silica, which chemists report as *silex*. Now this stone, fresh from the quarries, was tested for its resistance to pressure, and after keeping in the laboratory at a temperature of say 80° Fahr. was again tested and found to have lost twenty-five pounds to the square inch, and its specific gravity was correspondingly less; hence, I am not sure but the gravity alone is a safe criterion for the loss of the resisting power of any building material, but will have more to say of this further on when some further tests are completed.

The original processes, then, of the formation of this particular variety of stone, more evidently such as admitted of the taking up of some, what we may call extraneous matter, and, when the surplus water found an avenue of escape by the stone being exposed to atmospheric influences in drying or seasoning, this was volatilized and carried away, lessening the weight and, of course, having these minute interstices that lessened the crushing strength. That the extra water was not the cause of this is

additionally shown by the contractile power the stone possessed, for it was found that in seasoning, the stone had decreased in size, but in what proportion to water I failed to make note of, hence it is plain to be seen that some portions pass off, leaving the stone in a spongy condition, and being, as we might say, part of the original combination, the stone lacks the contractile power to close these pores. What this and other substances are, will form the subject of another chapter.

[To be continued.]

Domestic Architecture.*

BY E. H. TAYLOR, ARCHITECT.

This assignment was made because the writer, in an unguarded moment before the beginning of actual practice, perhaps rashly, expressed a willingness to be content if he could establish a reputation for successful work in designing dwellings.

Experience has more or less modified that opinion, and yet the theory is a good one.

While the repeating of the same class of problems may be monotonous, and the change from one class to another restful and spicy, yet it is a great drawback to approximating perfection to not carry out one line of work by itself. The crudeness of our productions is largely due to the smattering study we give. First a dwelling, then a store, next a church, and so on through the list.

What design does not, in its executed form, show defects that make the author sigh for a chance to do it over again?

As the dwelling belongs to the broadest class, and its problems come most frequently, there is more opportunity in this line for excelling.

Here may and should be expressed the inmates' individuality through-out, and in no class is there more variety and exaction of requirements.

Ruskin, in his "Poetry of Architecture," says the architect should be a metaphysician and, studying the family for whom he plans a home, acquaint himself with the character and requirements of each member.

It must be remembered above all things that the dwelling is to be a practical structure. In none is awkward and incongruous work more deplorable. Its use is more constant and affects more people than any other building, in their health, happiness and general welfare. From birth to old age every person is intimately related to it, though not necessarily acquainted with any other. If illy planned and constructed its effects may be widespread, most serious and sad, touching mere matters of pleasure or the very lives of the dwellers. How many extra steps must be taken every day, simply from thoughtless arranging of doors and cupboards! How much extra work is caused by the affectation of what were once necessary methods, in the leaving of the good things of today, as for example the retrograde to the small and multiplied lights in windows!

Though the fancy is tickled by the odd and quaint, yet it should not be resorted to in places; it adds to liability to frequent repairs, or increased expense and added labor in the fight against collecting dust, rain and snow. How much openly expressed or silently thought profanity, from breakneck steps and other awkwardly, if not dangerously, planned elements! How easily might the ventilation of a room have been improved by thought for that end in placing doors and windows! How many cases there are where the ghosts of haunted houses come from defectively planned waste-pipes!

On the other hand, what extended and unending satisfaction comes from perfectly planned dwellings, where an appropriate place is provided for every piece of furniture; where the housewife has her heart's desire in number and size of closets; where every gas jet sheds its light in the right spots; where every fixture is in its proper place; in short, where everything contributes to the safety and convenience of the inmates!

While in this, the charming client of the fair sex graces our office with her presence; yet alas! she often tries our patience beyond endurance by persistently insisting upon the incorporation in her plans of the unsuitable and incongruous features she saw at — in her last summer's trip, or her Aunt Susan has in her house; and there are the hours spent in the vain attempt to get large closets for every room, if not more, in impossible places.

While commendable ambition longs for opportunity for distinction in designing lofty business blocks, churches, court and state houses, let it be remembered that it is not wise to despise the day of, or small things themselves.

Although the inmates of a home are *the* factors, yet the house plays no unimportant part, and to the latter the architect should be happy to contribute; than which, what can be nobler? What has more hallowed sacredness and tenderness around it, or who can estimate the comforts, attractions and possibilities of a *true home*?

Then cultivate patience for solving these problems in domestic architecture. Work them out with painstaking thought and conscientious faithfulness, making each, no matter how humble, as perfect as possible, and the members of many homes will call you blessed.

FOR dwelling houses and medium size stores, fireproofing has not as yet been generally adopted, the cost has, perhaps, been the drawback, or the old idea that what was good for our forefathers is good enough for us, may still exist; but in all new buildings the great object to be obtained is to make them as fireproof as possible. Economy of construction is often to be considered, and in such case the cheap and effective fireproofing will find a ready market. A fire-resisting construction, patented by J. N. Glover, of Chicago, seems to offer excellent protection from fire. It consists of plaster, laid on a bed of wirecloth, and isolated from the walls and ceilings on which it is applied. Its cost is only a trifle over the usual cost of common plastering. The entire building of J. H. Walker & Co., on Wabash avenue, has been treated in this way.

* Paper read at the semi-annual meeting of the Architectural Association of Iowa, August 11, 1886.

Architectural Ironwork.*

BY C. W. TROWBRIDGE.

IRON IN FOUNDATIONS.

OUR president tells us that no one member is eligible to membership in this club unless he makes two sketches or reads one paper each year. I have been booked for a paper tonight, and have my fears that before I conclude this reading you will wish I had made two sketches instead. I find putting my ideas on ironwork into shape on paper a rather difficult matter. Mark Twain, in his "Tramp Abroad," speaking of the facility with which men, animals and birds put their thoughts into words, says: "I have noticed a good deal, and there is no bird or cow, or anything, that uses as good grammar as the Blue Jay. You may say a cat uses good grammar. Well, a cat does; but you let a cat get interested once, let a cat get to pulling fur with another cat on a shed, nights, and you will hear grammar that will give you the lockjaw. Ignorant people think it is the noise that fighting cats make that is so aggravating, but it aint, it is their sickening grammar." When I get interested in a subject, my grammar is sometimes defective; still I hope you will find something interesting in the description of the processes which I shall give you tonight. A month or two ago I made a synopsis of the headings into which I thought to divide this paper, making the first part descriptive of the process of manufacturing iron into the shape in which it comes to an architectural ironworks, describing the making of pig-iron, wrought-iron bar and steel, devoting the second part of the paper to the processes in the architectural ironworks and at the building, classifying structural iron into foundation ironwork, cast-iron, wrought-iron and steel, and treating ornamental iron work under the head of cast and wrought ironwork, mentioning under each head some of the most important processes, giving some data regarding the strength of finished work and the influence of shop processes on the ultimate result; also mentioning some of the most common defects met with under the present régime, reasons that they occur, and the methods of detecting bad work. It would be useless for me to make any suggestions regarding design, as you are all probably better designers than I am. The only available place for me to be of service is to describe the shop methods, so that you may see what is the easiest to produce, and also avoid the error of designing or specifying anything which is an impossibility. I have found that the paper, as originally intended, would occupy too much time, so I have omitted entirely any mention of the process of manufacturing what the architectural ironwork consider as raw material, and will deal only with the work after it gets into the ordinary foundry and fitting shop. Even this I shall divide into two papers.

Iron and steel in foundations is a subject so entirely different from ordinary building works, that I have decided to mention cast and wrought-iron and steel at the same time, rather than separate them as I have in the rest of the paper. The conditions of service are so different from work not subject to oxidation, that entirely different methods must be employed in determining the factor of *ignorance* to be used in the design. Some prominent engineers and builders say that steel rails or other ironwork bedded in concrete, lime or cement, such is usually the case with foundation, will last always, instancing the iron clamps, etc., removed from old Roman walls 1,500 to 2,000 years old, and referring to many other similar cases in which iron has been found after a long period of time has elapsed to be in the same condition as the day it was put in the walls. I have, during the limited time I have been able to give this matter, inquired in several directions for data regarding ironwork in Chicago subject to conditions analogous to these under which our iron foundations exist. I have not been able to find any instances of iron fully covered with cement masonry at or near the Chicago sewer level, where any great number of years have elapsed to show what the actual result is, but in such cases as the holding-down bolts of engine beds and other machinery, and in cases of pipes for gas or water, passing through area or other walls, I have found several instances where the covering or masonry had become cracked, or never was sound or water-tight, moisture having worked in around the iron from the bottom end of the bolts and from places where the pipe entered the wall, resulting in very serious rusting for twelve or eighteen inches from the point of the exposure. This was attended with the customary swelling and destruction of the masonry adjacent. A prominent builder, who removed part of the foundation of a new office building to examine the condition of rails used in these foundations, found a thin film of rust on the surface of the rail sufficient to destroy the adhesion of the cement. The cement broke off in blocks, leaving the rail clean. This thin coating of rust was probably caused by the moisture of the cement when put in place. Whether any further oxidation would have taken place from moisture passing through the cement coating is an open question on which I have no data to form an opinion. The gas companies give some curious data regarding the life of iron pipe laid in the ordinary way, directly in the earth, both with and without the coating of tar or asphalt. Their experience is that different localities in the city give very different life to the pipe. For instance, in the neighborhood of Cottage Grove avenue and Thirty-first street, the life of ordinary wrought-iron service pipe is ten to fifteen years, and cast-iron mains, one-half to three-quarters inch thick, that were put down eighteen or twenty years ago, are still in good condition, while down town, where pipes lay in *made ground*, one-inch wrought-iron pipe lasts only three to five years, and cast-iron pipe eight to ten years before they are totally useless. In Market street there is a main laid eighteen to twenty feet below the surface, which, of course brings it below the water level of the river, which was put in place in 1852, and is now in good condition. This is probably owing to its always being covered with water, these conditions being much more favorable than at the sewer levels where water rises and falls around the pipe. An instance of the greater rapidity of oxidation where two different

metals are used in one construction underground, occurred where some large gas mains were cut at a street crossing to connect cross mains. As there was no provision made in the original mains for the cross mains, they cut holes in the sides of the main lines and bolted on sockets for the crosses, using wrought-iron bolts. These bolts rusted out about every three years, while the cast-iron remained sound, several sets of new bolts having already been put in said crosses. Mr. Forestall, vice-president of the Chicago Gas-light and Coke Co., says that where asphalt one-eighth to one-quarter of an inch thick is put around cast-iron pipe, that it is a positive and perfect protection against rust, that changes in temperature and levels of pipes are not great enough to crack this thick asphalt, that its elasticity enables it to remain sound. The reason they put this asphalt around the pipes after they are laid in place is that the gas acts chemically on the asphalt, dissolving it out of the bell and spigot joints. They had a case of thirty inch main where they had to go over the whole length and recaulk the lead in all the joints, owing to this action of the gas. Their experience has been that a mere coating applied with a brush or a coal tar varnish was not desirable, one-eighth to one-quarter of an inch being necessary to permanent protection.

Regarding the statements made by prominent architects and engineering authorities that steel rails bedded in concrete will last forever, while I do not feel like questioning their verdict I feel that I am perfectly justified in saying any small fracture of the cement covering will, by allowing the water to enter and start rusting and swelling ultimately result in the destruction of the entire foundation. It seems from my standpoint that it is of the utmost importance to prevent any possibility of harm coming to the concrete or mortar surrounding any ironwork that is at or near the sewer level, and in designing foundations with steel rails or other ironwork, pains must be taken to make sure that there will be no strain sufficient to crack the concrete surrounding the ironwork. I have also heard it advocated in some quarters that the concrete and the rail bedded in it acted together as one solid mass, or as a compound beam made of iron and concrete. I can hardly indorse any theory that would consider materials of different elasticity as working together in harmony under transverse strain, particularly where one material entirely surrounds the other. Suppose the load was sufficient to give the iron $\frac{1}{4}$ inch deflection in four feet. This would not approach the elastic limit of the iron, but the cement would surely crack and be worthless, letting in moisture which would rust and swell the iron, disintegrating the entire footing. I can see no safety except in designing footings that would carry the load on the ironwork only without deflection enough to destroy the concrete, and as a further precaution would suggest coating of ironwork heavily with asphalt or other waterproof elastic material before making your concrete covering. This is particularly a case where an ounce of prevention is worth a pound of cure. As we all know it is a pretty expensive operation to hold up a building and put in a new foundation.

I think the use of cast-iron footing instead of steel rails would yield more desirable results in all directions. The skin which forms on the outside of the casting has a silicious or glassy character which retards oxidation very much more than the natural coating on wrought-iron or steel.

The universal report is that cast-iron outlasts wrought-iron three to one. The shape in which cast iron could be used would also permit very thin beds of concrete below the iron. The form most natural to adopt for footings is the ordinary lintel, having a flat bottom laid directly on the concrete, the ribs running across the wall from side to side. I have made a sketch of a footing twelve feet wide for a three-foot brick wall, estimating the load at eight tons per square foot on the wall, which gives us two tons on the bottom of the footing. For steel rails I use an extreme fiber strain of 20,000 pounds to the square inch, which would give a total deflection of about $\frac{3}{8}$ ths of an inch. Using 3,000 pounds extreme fiber strain in the bottom of the cast-iron lintel-shaped footing, would give a deflection of about $\frac{3}{4}$ ths of an inch with the load above mentioned. I find that by using five layers of rails I would have for a section of a wall ten feet long 484.4 feet of rails, weighing 10,655 pounds. By using three layers of rails so proportioned that I get the same fiber strain for similar loads, I have for ten feet of wall 431 feet of rails, weighing 9,482 pounds. For a cast-iron footing I find it necessary to have the bottom plate two inches thick, with ribs twelve inches apart, fourteen inches high, two inches thick at the bottom, one and one-half inches thick at the top. This would weigh, for ten feet of wall, 15,400 pounds. As these castings would probably cost about $1\frac{7}{8}$ to 2 cents per pound, and the rails 2 to $2\frac{1}{2}$ cents per pound, delivered at the building, there would be a saving by the use of the rails of \$75.65 for five rows of rails, and of \$99.11 for three rows of rails over cast-iron in the cost of material in the ground for ten feet of wall. I have in this calculation taken a pretty high strain for the rails, and a low one for the castings, as in such places castings should not run any risk of being overloaded. I might say that I consider the factor of safety three for the steel rails and seven for the cast-iron. If the casting was as good as the one tested by me at Louisville a few years ago, the factor of safety would be mine; but as pointed out elsewhere in this paper, there are so many things that might make bad spots in castings, it is always best to allow a good large margin until foundries have testing machinery, and are ready to guarantee that lintels and such castings have been subjected to two or three times the working load and found perfect. When that time comes the weights of cast-iron used for transverse strains will be reduced at least one-half from the weight ordinarily used in our present practice. In concluding on this subject I will express my opinion that cast iron has so many qualities to recommend its use where iron foundations are decided upon, such as resistance to oxidation, both from its protecting skin and its greater thickness in the vital parts subject to the attacks of rust, the adaptability of form and the capacity to be cast in almost any desired size of footing up to, say 12 by 12 feet, that it will probably be used in the near future, and our time cannot be spent to better advantage than in trying to get definite and reliable information on this subject. I speak of the method of casting such pieces under the head of open green sand molding.

* Paper read before the Chicago Architectural Sketch Club, August 30, 1886.

STRUCTURAL CAST-IRON WORK.

I will describe the shop processes in the following order: Castings, wrought-iron and steel.

As castings have the longest and most interesting processes I will mention them first. Foundries purchase their iron for castings in the form of pig, using No. 1, 2 and 3, and scrap-iron in greater or less proportions, according to the market, using different mixtures according to the kinds of castings they wish to produce. Strong iron, such as they want for columns, lintels and frame work, are slightly red, short or brittle when hot, but very strong when cold. This quality is usually attributed to the sulphur in the iron, which makes the melted iron flow sluggish, like molasses. This is one of the reasons why constructional castings are made thick, say from $\frac{5}{8}$ of an inch upward, according to the size of the piece. When iron has less sulphur and more phosphorus it becomes cold, short, being very fluid when melted and running very freely in molds, forming sharp, clear outlines, such as we see in light shell work and in stove plates. Phosphorus also reduces the amount of shrinkage and the different minute variations in the amount of sulphur and phosphorus result in an infinite variety of foundry irons, each good for some particular use and often worthless for others. A foundryman, by using different kinds of pig and scrap, produces mixtures having the different qualities which they desire. This is a matter on which foundrymen each have their particular and peculiar ideas, and architects may depend upon it that no matter how carefully they may specify the iron they wish used, the foundryman will do as he pleases in the selection of irons and making his mixtures. Superintendence that goes back to the quality of finished product will be difficult and unsatisfactory.

In melting iron the process almost universally adopted is to melt pig and a small percentage of scrap, spews and rejected castings in a cupola furnace. This is simply a round iron tower lined with brick, and provided with blast pipes near the bottom, using a blower giving an air pressure varying from six to twelve inches of water. The iron and fuel is put in in layers, the first layer of fuel being quite thick, to form a bed, and last the entire heat with small additions from the little layers of fuel between the charges of iron as they come down. As the iron melts it runs down through the fuel into the bottom, the fuel floating on top of the melted iron at the bottom of the furnace. The distance from the bottom of the cupola to the blast openings or *tuyères* varies in different foundries, according to the amount of iron they wish to accumulate in the cupola between times of tapping out. In some stove foundries the *tuyères* are very close to the bottom, and the iron runs continually, but in architectural foundries it is quite common to have space enough to hold three or four tons before tapping out. You will see that the iron and fuel are all charged in together, so that any sulphur or other impurities in the fuel are liable to get into the iron; thus only the best coke or coal are suitable for use in the cupola. Some foundries charge limestone or fluorspar with the iron. This forms a glass or slag, which takes up the dirt and floats on top of the melted metal. This is allowed to run out at a hole just below the level of the blast pipe. Oyster shells are sometimes used, but these are objectionable on account of the phosphorus in them. When the bottom of the cupola is nearly full of iron the slag runs off the top. When iron begins to run out of the slag hole it is time to tap out. As the iron is exposed to the air in the process of melting some of the carbon and silicon in pig iron burn out, making the resulting castings closer grained, lighter colored and harder than the pig from which they were made. For this reason all scrap would hardly do for a day's melt, but if an iron high in carbon and silicon is used, considerable quantities of scrap can be melted, the resulting castings being of the quality desired. We often hear the expression, "They use old kettles and stove lids at that foundry, their castings can't be good anyway." Let me say that when iron is good enough for kettles and stove lids it is good enough for anything else, and a small percentage of stove scrap mixed with some good, dark-colored, coarse grain No. 1 and a little silver gray will make tip-top columns and lintels.

Molds are classified into loam molds, dry sand and green sand. Loam is hardly ever used for architectural work on account of the expense and time required, but is just the thing for large pieces of machinery, petroleum retorts, glucose and sugar refinery kettles, etc., so I will not take time to describe loam molding here. Dry sand is used a little, but not much in architectural work, except for cores. For this it is almost universally used. Cores are made of coarse, sharp sand, free from loam, mixed with flour and molasses molded into shape and baked over night in an oven. Cores for columns are usually made in boxes, making one-half the core at a time, baking them in that shape and pasting them together afterward. Although in many places they use a half round pan, and at each end put a circular piece of iron the diameter the core is to be, using an iron-faced straight edge to sweep off the top of the core, making it full round in one piece. In these cases a pipe is put in the middle of the core to carry off the gas, this pipe being about one-third the diameter of the core and drilled full of holes. In case the core is made in halves a gutter is scraped out of each half, which leaves a hole for the gas when the two halves are put together. Small cores usually have wires or rods according to the size of the core put into them when they are made and drawn out afterward, leaving holes for the escape of gas; for although these cores are usually baked all night in a close vault or oven with iron doors and a good, big fire there is lots of moisture in them, which becomes steam, and highly superheated steam at that, when the melted iron surrounds the core. This steam, together with the carbonic oxide gas made by the decomposition of the molasses and flour, form an inflammable and explosive gas which you always see streaming out of the ends of column molds when they are poured, and which is lighted and burns with a strong flame for some time after the molds are full. If not lighted it soon finds some red-hot iron and lights itself with a loud report and some shock. Molders usually light the vent at once, as a shock sometimes injures the mold and spoils the casting. Accidents are sometimes caused by neglecting the venting of the core. I have seen a half ton of iron come out quicker than

it went in because the vent to the core got closed, the gas coming out rapidly and filling the space intended for the iron instead of passing off quietly through the vent pipe provided for it, throwing the iron out of the risers several feet high. Incidentally I might mention that it made things lively for the men around that mold, burning one or two men severely, and, of course ruining the mold completely. The man who made the mold got badly burned, but could only curse the core maker and wonder why he didn't see that the end of the core was stopped up. Small cores set for bolt holes, etc., usually vent into the adjoining sand of the mold, but larger ones always have to be provided with holes for the escape of gas. The reason I have taken up so much time in describing cores is the impossibility of making castings with cored spaces without providing ample means of venting. We often see architects design castings that are impossible on account of cores being entirely surrounded by iron, and my object is to say so much on this subject that you will always remember the necessity of good, free means of egress of gas. If ample means are not provided the result will be air holes, bubbles and all sorts of hollow spaces, which sometimes will seriously injure castings.

Dry sand molds are made the same as cores, baked in an oven. The advantages are greater strength of mold so that greater heights of metal can be poured in without forcing the sand out of shape and making the castings too thick. Pipes and other long pieces that are usually cast on end are made in dry sand with strong iron flasks. When we get to making columns on end they will be molded in dry sand too. The great obstacle in making columns on end is that dry sand costs more. The expense increases rapidly where irregularity, like caps, bases and brackets occur. These things have to be cast on, and while it is a very simple matter to cast a water pipe in dry sand, a flange 12 or 16 inches square on each end, and a bracket on each side two feet from the top, would make things very interesting. To mold dry sand with only one night's baking necessitates comparatively thin sand. The flask or case in which the mold is made would have to conform in a manner to the shape of the column, necessitating many expensive iron flasks for a small range of business. The utmost strength of flask is also necessary. For a column, say 16 feet high, made of iron, which weighs 450 pounds to the cubic foot would give a pressure of 7,200 pounds per square foot of fluid metal at the bottom of the cast, all of which has to be provided for.

Pipes are cast in iron flasks that are round and perforated for the escape of gas. The thickness of mold is very slight, only one or two inches. The cores are made on iron core barrels or pipes with an equally thin coating of sand all baked before use. Hay rope is wound closely around the core barrel the whole length, and considerable loam mixed with the sand. This is plastered onto the hay, the core barrel being turned around, and the superfluous sand scraped off with a straight edge to bring the core to proper size. When the cast is made this hay becomes charred about the time that the iron sets, and passes off in the form of gas, leaving the loam comparatively loose on the barrel. This enables the core barrel to be drawn out easily. It also allows room for shrinkage as the pipe cools. This shrinkage in the 16 foot pipe is about two inches in length, and for 12 inch diameter about $\frac{1}{8}$ of an inch in the diameter of the pipe. Now, suppose we had 18 inch square flanges, on the ends. If our mold was strong enough to stand 7,200 pounds pressure of fluid iron, it would object to the shrinkage of the two inches in length. Very good judgment would be required on the part of the molder to make a hay cushion, or anything else that would stand up to the pressure as long as the iron was fluid, and give way to the shrinkage when it commenced to cool, and was about the consistency of good, solid cheese. I think when columns are cast on end they will have to be designed without brackets and end flanges so that shrinkage can be taken care of and less expense incurred for flasks. The tendencies in modern designs of construction are such that designers would probably prefer to continue the use of green sand rather than omit the casting on of brackets and other projections.

Green sand molding is used for the great bulk of architectural work of today, and I don't think it an exaggeration to say that no trade connected with building calls for so much judgment, care, and fine hand skill as green sand molding on architectural work. Green sand is classified into snap work, flask work, bedding in and open sand. Green sand is a name which designates molds made of sand, dampened slightly with water, rammed into the required shape, and the iron poured in without baking or hardening of the mold by heat. For heavy castings coarse sand, with even a little fine gravel, is used, as it makes a porous mold through which the gas can escape rapidly. For finer work finer sand is used, and for stove plate very fine, clean sand that will take impressions of fine lines is necessary. Such sand would not do for thick castings as it would not let the large amount of gas generated by thick castings pass off rapidly enough. In all cases the faces of the mold next to the cast is made of a thin layer of fine sand, the coarser sand being used for the backing and body of the mold. All these sands have to have a proportion of clay or loam to make them stand firm and keep their shape against the wash and pressure of the iron. For the different classes of work that have to be done in a house shop three or four kinds of sand have to be kept in stock, also clay to temper with. This preparation of the sand is quite an important matter, and many rough castings are produced, owing to carelessness or lack of skill in the selection and preparation of sand suitable for the work.

(To be continued.)

DURING the month of August the Babcock & Wilcox Company placed the following boilers: New York Steam Co., N. Y., twelfth order, 1750 horse-power; Young & Farrell, Chicago, third order, 82 horse-power; Lawrence Rope Works, Brooklyn, second order, 125 horse-power; Grand Avenue Cable Road, Kansas City, 600 horse-power; Swift Manufacturing Co., Columbus, Ga., second order, 75 horse-power; Albaitero & Arrache, City of Mexico, 184 horse-power; Thompson Bros., Philadelphia, 15 horse-power; New York Steam Co., N. Y., thirteenth order, 1,000 horse-power.

Association Notes.

WESTERN ASSOCIATION OF ARCHITECTS.—Convention will be held November 17, 1886, at Chicago. John W. Root, Chicago, secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Thursday of every month, at 15 East Washington street, Chicago. Annual meeting first Thursday in October, 1886. Louis H. Sullivan, Chicago, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at St. Louis on the second Tuesday in January, 1887. Thomas B. Annan, St. Louis, secretary.

KANSAS CITY SOCIETY OF ARCHITECTS meets Monday afternoon of each week, at 4 o'clock. Annual meeting second Saturday in April, 1887. F. B. Hamilton, secretary.

THE ARCHITECTURAL ASSOCIATION OF IOWA, annual meeting, second Wednesday of January, 1887. C. H. Lee, Des Moines, secretary.

THE ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 4, 1887. Irving W. Kelley, Minneapolis, secretary.

KANSAS STATE ASSOCIATION OF ARCHITECTS meets at Topeka on the third Tuesday of January, 1887. H. M. Hadley, Topeka, secretary.

ASSOCIATION OF OHIO ARCHITECTS meets semi-annually. Next meeting, third Thursday in January, 1887. O. C. Smith, Cincinnati, secretary.

ASSOCIATION OF TEXAS ARCHITECTS meets at Austin on the third Tuesday of January, 1887. S. A. J. Preston, Austin, secretary.

NEBRASKA STATE ASSOCIATION OF ARCHITECTS meets first Wednesdays in January, April, July and October each year. F. M. Ellis, Omaha, secretary.

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday, Builders' and Traders' Exchange. W. G. Williamson, secretary.

THE WESTERN SOCIETY OF ENGINEERS meets the first and third Tuesdays of each month at 4 o'clock P.M., at 15 East Washington street, Chicago.

THE MASTER PLUMBERS' SOCIETY, of Chicago, meets first and third Wednesdays of the month, 7:30 P.M., at 15 East Washington street.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS.

At the monthly meeting on the second instant, a quorum not being present, the time was passed in sociality and informal discussion. There were present as guests, Architect E. H. Taylor, of Cedar Rapids, Iowa, and J. W. Beach, Esq., Chicago. The Committee on Sanitary Legislation were prepared to submit the following bill which will be presented at the October meeting for action.

AN ACT FOR THE REGULATION AND INSPECTION OF THE SANITARY CONSTRUCTION OF BUILDINGS.

SECTION 1. Be it enacted that it shall be the duty of any person intending to erect any building in a city or town, in which there is established an officer or department of health, to obtain from such officer or department a blank entitled "description of building," fill the same in a manner fully describing the intended building, with its plumbing and sewerage fixtures, and submit such description to the said officer or department for examination and approval, which approval shall be granted only on condition that assurance—direct and implied—is given that the sanitary conditions of building will be in accordance with the provisions of this act.

SEC. 2. No building permit shall be granted by any building department in such city or town before the above said approval is obtained and presented to such department.

SEC. 3. There shall be no privy pits on any lot adjacent to a street or alley wherein there is a public sewer, and all present pits of the kind shall be cleaned out and abandoned and contents removed off the premises within three months from notice being given to the effect by the officer of department of health.

SEC. 4. The boss-plumber executing the plumbing work or causing its execution, in any building—other than mere repairs—shall, before in any way concealing such work, be this through his own agency or that of other mechanics or operatives working upon said building, notify in writing the officer or department of health to this effect that the said plumbing work there and then is in a state of completion and allow such officer or department a full working day's time for proper inspection of and officially passing upon such said work.

SEC. 5. A habitable room in any building shall have one or more windows of dimensions not less than one tenth of the area of floor space of each room, and the open space or light-shaft to be established for such windows or window shall have an area of not less than fifteen superficial feet for a building three or less stories in height with an addition of five superficial feet for each additional story, and such open spaces shall be part of the lot upon which the building is to be erected.

SEC. 6. Skylight coverings of lightshafts shall be so constructed as to allow admittance of fresh air into the shaft, and openings for this effect shall be not less than one twentieth of the area of such lightshaft.

SEC. 7. Habitable rooms henceforth to be arranged or newly entered shall have an average height of not less than eight feet.

SEC. 8. The hallway in any building shall be lighted and ventilated, be it directly from the open air or indirectly from a skylight.

SEC. 9. A water-closet room, or bathroom with water-closet, shall have ventilation through an express and independent air shaft, the area of which shall not be less than one superficial foot. Said shaft to extend not less than two feet above the roof and be arranged for admission of air. Each bathroom shall be lighted by a window opening to a separate lightshaft or to the outside air, or by a French window off a general lightshaft.

SEC. 10. No alterations, additions or converting to a different purpose, which will change or alter any or all of the sanitary conditions or arrangements in any building, shall be made, except upon the express written approval of the proper officer of the said department of health; nor shall any additional structure be erected upon any lot on which there is already a building except upon such approval and a special written permit.

SEC. 11. Sewage drains shall be laid with a uniform decline of not less than one-tenth of an inch to the foot. There shall be a trap and adjacent air inlet in connection with the drainage system of each building, located without such building, and the entire sewerage systems for any building shall be so constructed as to allow ready and complete inspection when completed.

SEC. 12. Earthen sewage drains shall be laid upon a foundation expressly prepared for the same, and their joints shall be made absolutely tight and permanent.

SEC. 13. Metal sewage drains and soil pipes, if not enameled, or not of noncorrosive material, shall be covered inside and outside with a coat of asphaltum. Their joints and their connections with any tile drain shall be made absolutely tight, in manner as prescribed by the officer or department of health.

SEC. 14. Every soil and waste pipe shall be of durable and permanent material, satisfactory to the officer or department of health, and each pipe shall be vertically extended in the full size, through the roof of building to a point at least two feet beyond the highest surface of same.

SEC. 15. No chimney flue or waterleader pipe shall be used for conveyance of exhaust steam or for ventilating soil or waste pipe.

SEC. 16. All sewerage plumbing work shall be executed in a thorough manner satisfactory to the officer or department of health, whose privilege it shall be to make proper tests as to the quality of such work.

SEC. 17. There shall be a trap to every water-closet, sink and all other plumbers' fixtures in building.

SEC. 18. Overflow guards to any fixture, and wastepipes to refrigerators, shall have independent wastepipes, which have no connection with the sewerage system.

SEC. 19. No lead pipe shall be connected with an iron pipe except by means of a metallic ferrule or other means expressly approved by the officer or department of health.

SEC. 20. Any duct admitting fresh air to an apparatus intended for warming shall not be concealed below the lowest floor in a building.

SEC. 21. Any duly authorized officer of the said department of health shall, so far as may be necessary for the performance of his or their respective duties, have the right to enter any building or premises in such cities or towns.

SEC. 22. Any person violating any of the provisions of this act shall, upon conviction before a court of justice, be fined in a sum of money not less than \$250 nor more than \$500.

SEC. 23. Any person thus convicted and fined, as specified under Sec. 22, shall begin to rectify the said violations of this act within two days from conviction, and push such work with energy, so as to have it completed within a certain time to be set by the officer or department of health, and in default thereof become again and again subject to another fine, and still another, in accordance with said Section 22.

SEC. 24. Said court of justice is hereby still further authorized to issue, upon due application of any officer of a department of health, an injunction against the use or occupation of any building or structure which is erected or altered, maintained or used in violation of this act.

SEC. 25. This act shall take effect immediately after its passage.

SEC. 26. Any and all legal provisions being in conflict with this act shall be null and void.

After some informal discussion the meeting adjourned.

KANSAS CITY SOCIETY OF ARCHITECTS.

THE time of the weekly meetings of the Kansas City Society of Architects is Monday, at 4 o'clock P.M., in place of Saturday, as heretofore published. The first meeting after the summer recess will be held September 6, 1886.

CHICAGO MASTER PLUMBERS.

W. H. Genung, chief of the health department, attended the Master Plumbers' Association meeting of the 2d instant, and explained the different methods suggested by the health commissioner to prevent the escape of sewer gas, caused through defective connection of metal with tile piping where house-drains enter the sewer. At the present time the ordinance governing the point reads that "neither cement nor mortar can be used for the purpose," as either composition is even more porous than brick, through which atmosphere can be pressed with sufficient force to extinguish a light six inches from it. Mr. Genung said that any suggestion that could be made by the plumbers was acceptable to the health department. It was proposed that a new ordinance be framed which would contain a clause reading "the connection shall be made as the city office shall direct." After much debating, the plumbers decided in favor of a quarterbend, with a hermetically-sealed trap, twelve inches from the point of its juncture with an iron sewer-pipe. It was stipulated that the sewer-builders should stop their part of the work within two feet of the point where the plumbers' work is obliged to commence, and that instead of leaving an upsticking "bend," as is at present done, the section should be horizontal, also with a trap twelve inches from its point of juncture. This, it is claimed, allows easy cleaning of matter collected in the pipe, and will, if properly sealed, entirely do away with the sewer-gas and its contingent molecules of malaria.

Our Illustrations.

KANSAS CITY EXCHANGE BUILDING COMPETITION.

The descriptions here given accompanied the drawings in the competition.

Design submitted by Architects Peabody & Stearns, Boston, marked "Puritan."*

The scheme herewith presented gives thirty-five excellent offices in the main office stories. The Board of Trade Hall and offices occupy the second floor. Above the hall is a skylight, which also lights the office corridors. The lavatories are isolated and near the boiler flue for ventilation. The restaurant is in the basement, with kitchen in sub-basement under same. The safety vault is in the sub-basement beneath the safety vault offices. The boiler and engine, etc., are in the sub-basement under the southern part of restaurant.

The offices in the building are numerous and all light and good. The corridors are thoroughly lighted. The hall is well lighted.

Design submitted by Architects Peabody & Stearns, Boston, under the device of a clover leaf.

The main hall is here placed in the fourth story, and is carried up into the roof, forming the main feature of the building outside and inside. The front of the building is intended to form an effective landmark from near and far. The safe deposit offices are in the basement and the safety vault is intended to be in the sub-basement beneath. The restaurant is in the basement, with kitchen in sub-basement beneath reaching from street to area. The boiler and coal room are under the southern half of restaurant, and also reach from street to area.

The full plan of office stories give thirty-two offices, and the formation of the Eighth street front makes them nearly all extremely desirable offices.

Design submitted by Architects Peabody & Stearns, Boston, under the device of a crescent.

In this design the elevators are massed together near the stairs. Visitors to offices above, by stairs or elevator, will not interfere with the Board of Trade business, as all the offices of the Board of Trade connect with each other by lobbies and corridors of their own.

The hall forms the central feature in the second floor. Liberal lobbies for those having business with members, and ample space for telegraph and telephone service, immediately adjoin this hall, and near by are the various offices called for. There are thirty-three offices to a floor in the main office stories, and the formation of the Eighth street front renders most of these offices very desirable. A sub-basement is intended to contain beneath the deposit vault offices a large deposit vault; beneath the north

*These architects were among the three paid competitors.

half of restaurant a kitchen reaching from street to area, and beside it, also reaching from street to area, a boiler and machinery and coal room.

The janitor's and watchman's bedrooms are intended to be in the roof story.

Design submitted by Architect George B. Post, New York, under the motto: "In me mea Spes Omnis."*

EDWARD H. ALLEN, ESQ., *President*; PROF. WILLIAM R. WARE, *Professional Adviser*.

Gentlemen,—I have the honor to submit the accompanying plans, with this memorandum as their explanation, as my scheme for your proposed new building.

I shall refer to the different features of construction and arrangement in the order of their presentation in your pamphlet of instructions.

As I have frequently found by test that confined wet clay will bear before initial compression a load of two tons to the foot, I contemplate a spread of footings to bring the pressure on the soil in the trenches within that limit.

I leave the choice of materials for façades for future discussion, in case my plans should receive your favorable consideration, with the comments that terra-cotta is somewhat cheaper in general than stone, and that my design does not contemplate the use of violent contrasts of color.

I cannot recommend the use of any slow burning construction in which wooden beams are inclosed in fireproofing material, as it has been my experience that when so inclosed the danger of rot is exceedingly great.

I have provided for the arrangement which has in my city been proved to be the most desirable for securing the maximum rents, by making no interior fixed partition walls, but by securing sufficient dynamical stability for the exterior walls by their form and dimensions, and supporting the floor throughout by columns and girders.

Any interior partitions may be removed at any time to suit the requirements of tenants, and it is my practice to make the floor construction sufficiently strong throughout to carry partitions at any point.

Thus if I have allowed too much space for the banks they may be made smaller. If direct and independent steps to the banks from the streets are required they may be provided.

Experience in my city has proved conclusively that there is great advantage in placing the restaurant and kitchen in the *top story*, if a service elevator is provided to connect it with the streets.

All windows in my plans have their heads in close proximity to the ceiling, and no sill is 2 feet 9 inches from the floor.

I have located the Board of Trade hall in the fourth and fifth story, to secure a proper height of ceiling to make it of good proportion.

I have also for the same reason run the small hall through two stories.

I have grouped the *elevators* in the most *central position*, and have arranged them in relation to each other to provide for the most rapid and systematic running.

Experience in my city has proved conclusively that even at very considerable sacrifice in other respects, it is an economy to place the elevators where they can be perfectly lighted at all their landings.

I propose to make cellar floor space (in preferably the east wing) for 400 horse-power of boilers, which would give, with a margin, steam for five elevators and steam heat, and 1,000 incandescent electric lamps, viz: 150 horse-power for heating, 150 horse-power for elevators, 100 horse-power for lamps.

The exhaust steam to be used in the circulation for heating, its pressure made constant by the introduction of live steam through an automatic equalizing valve.

The chimney is distant from all offices.

I propose to make the hall partitions throughout from 5 feet 6 inches above the floors, of glass, as is almost universal in the office buildings in my city, which insures perfect light; and to ventilate by windows, and if required by flues.

I propose to construct smoke flues in every pier, and by design have made roofs of low pitch so that these flues will draw.

With fireproof floors a fireplace may be built in any office but I do not recommend their general construction before renting the offices, as it has been conclusively proved by experience in a number of office buildings which I have erected, that unless the office is very large the loss of wall space for desks, on account of the mantel, is more than equivalent to the gain in comfort in the possibility of using an open fire. In several buildings which I should name were not these plans sent in without signature? Out of several hundred fireplaces, in the aggregate but a very few are used, and the demands of tenants to remove mantels to make room for desks are not very infrequent; I have consequently not indicated fireplaces on the plans except in a few offices.

The introduction of the fractional valve and its accompanying steam system has removed the most serious objection to direct steam as a means of heating offices.

I have made the ordinary provision for water-closets and urinals, and have added on each story a water-closet room for female clerks and stenographers.

I have arranged for fireproof storage vaults in the basement similar to those which I constructed in an important office building in my own city.

If desirable this might be altered to a safe deposit company, and the cellar under it might be also occupied by vaults.

The prescribed scale of the drawings and necessary limit of length of this communication makes it impossible to describe intelligibly the system of ventilation which I propose. If my plans are otherwise satisfactory, I shall refer to two or three similar structures, already constructed by me, in which the system is in successful daily operation.

As my second and third story plans are practically identical, I submit but one plan.

For the same reason I submit no Central street elevation, as it is practically identical with that of Wyandotte street.

* This architect was one of the three paid competitors.

It may be an assistance to the committee and its professional adviser, in their labor of making estimates, to state that my scheme contemplates the construction of about 1,600,000 cubic feet of fireproof building, and that I have erected a large number of fireproof buildings with iron beams, brick floor arches, fireproof partitions, tiled halls and hardwood trimmings at an expense, varying with the market and amount of elaboration, between twenty and forty cents per cubic foot. At the present time the cost of most materials entering into the construction of fireproof buildings is exceptionally low.

In conclusion I direct your attention to the facts.

1st. No attempt has been made to show the correct thickness of walls in the plans or sections.

I should so proportion them that the maximum pressure per square inch on the brickwork with the floors loaded should be 150 pounds.

2. The corridor north of the Exchange Hall and the corridor above it would be carried by girders.

As the cost of the structure will be in direct proportion to the number of cubic feet constructed, and as no equivalent gain in rents would be secured by making the main building deeper in the lower stories, this method of constructing the galleries referred to is economical.

The offices under them would be darkened to the same extent as rooms by a high piazza roof.

If galleries in the Exchange Hall are desired they may be constructed on the north wall. As they were not mentioned in the instructions I have not drawn them.

Respectfully yours,
"IN ME MEA SPES OMNIS."

Design submitted by Irving K. Pond, Chicago, under mark of "Notus."

It is desired to call attention to the following points in the plan designated—"NOTUS:"

1. Direct light provided for all offices; southern exposure for the largest possible number.

2. Offices correspond in size to instructions, but capable of subdivision.

3. All corridors lighted by transom and by direct light.

4. Court so located as to give maximum southern exposure.

5. Location of court is such as to indicate position and extent of each hall, thus characterizing the building, and giving without loss of strength, an effect of loftiness and dignity incompatible with an unbroken front.

6. Each hall lighted from three sides.

7. The vault stack occupies the least lighted portion of the building.

8. The elevators are so placed as to be equally accessible from all entrances, of which those on Central and Wyandotte streets are so situated as to be nearest to the business center of the city.

9. Boilers, machinery and coal storage are in sub-basement, entered from Wyandotte street, on which boiler door is provided.

10. Safe hoistway, freight elevator and servants' stairway open on northeast corridor, adjoining boiler and ventilator flues.

11. Space for kitchen, stores, laundry, servants' quarters, etc., provided in roof, kitchen being lighted by top light.

12. Above the principal floor the tower is devoted to offices, which, by reason of near access through elevators and southern exposure, form the most desirable suites in the building.

13. Upper floors of tower devoted to restaurant uses as follows: eighth to business lunch, ninth to private dining-rooms, tenth with encircling gallery, to café. A restaurant with sufficient accommodation, would, on lower floor, intrude upon space extremely valuable for business purposes, but when in tower is readily accessible, commands a wide prospect of the city, and becomes a marked and attractive feature of the building.

14. The plan of the piers is such as to give at once the required strength and maximum of light, the window space being greater in width by upward of three feet than the distance between the piers. In all offices the window heads are square and close to the ceiling, those in the fourth story running above and at a distance behind the grand arches.

15. Fireplaces are provided in each office and in each hall, and to avoid smoky and non-acting chimneys, universally found in buildings of such height, with or without roofs, the flues run direct to attic, and connect with a large flue in which is placed an exhaust fan, giving power and directness of draft in connection with get-at-ability for cleaning and repairing. The expense of constructing the large flue through the attic and of running the exhaust fan, will be less than the expense of constructing individual exterior chimneys.

16. Ample accommodation is provided on each floor for general lavatories and closets, as also a basin with running water in each office.

17. The exterior is designed to be treated in red brick, with red sandstone of harmonious shade for basement and trimmings; roofs to be of red slate or tile.

18. The corner turrets are utilitarian features, and intended for dumb-waiters and staircases.

19. Clock in tower.

20. If it is absolutely essential that more office space be provided, the ceiling of the larger hall may be lowered to a level with the ceiling of the fourth story, and the entire fifth floor given over to offices, though from an artistic standpoint, such a change would be regarded as a grave error.

Respectfully submitted by "NOTUS."

JUNE 15, 1886.

AMONG the prominent buildings which have been recently covered with the Patten shingle, manufactured by Gummey, Spering, Ingram & Co., of Philadelphia, are the following: The court house at Mayfield, Ky.; a large church at Meridian, Miss.; a residence and warehouse at Gloucester, Mass.; a warehouse at Tamaqua, Pa., and the Exposition Building at Omaha, Neb. Several residences at Nashville, Tenn., have also been roofed with this shingle. The makers direct attention to the leading peculiarity of these shingles, which is the cleat, which not only holds the center of each and every shingle tightly in place, but serves also as a guide by which the succeeding courses are properly located and made straight.

New Publications.

In no field of duty has one of our kindred arts been so exalted as in that of recent landscape photography. As an exponent of true progress in this hitherto difficult domain, we refer to an admirable series of views, taken along the line of the Cincinnati, Wabash & Michigan Railway, in Indiana and Michigan, with the new Collins camera, by Mr. W. F. Lesser, of St. Joseph, Mich. The novelty and distinguishing merit of the new camera are, that it dispenses with the focusing cloth and ground glass field, minutely defining all objects before it, and by instantaneous exposure of the dry plate, reproduces and perfectuates effects, in living nature, not heretofore attainable. The examples of its work before us were taken early in the year, when the instrument was still under adjustment. Even at this disadvantage they are a revelation. But the more recent published series, referred to above, are most strangely and wonderfully beautiful. All true art qualities combine in these. The atmospheric effects, the spray of the surf, the foam of the rapids and all of the delicate gradations of chiaro-scuro, carrying the eye without blur or medley to the farthest horizon, all details and distance sharply defined become, by this art preservative, ours, not only for the instant of delighted discovery, but during the life of the imprint. Especially noteworthy are: the surf at St. Joe, with masquerading bathers; twilight in Sleepy Hollow; along the beautiful St. Joseph river; the falls at Niles; the cliffs at Wabash, winding to a dreamy distance; the reflected figures in the glassy pools of the parks at Warsaw, and the leafy nooks along Sodus Creek. For quiet beauty and well-defined character, these are perfect pictures. What encouragement may not photo-engraving attain when it can reproduce the delicacy of this matchless work.

Art Age has made an excellent change in their form of issuing special plates. This is in the form of supplements, enabling subscribers to separate the illustrations for use as studies or for hanging and will be generally appreciated. *Art Age* represents art in this country not only in its selection of subjects, literary and pictorial, but in typography; an undoubted artist in type evidently having had a large share in the excellent make-up of this journal. It fills the field of contemporary art as perfectly as one journal well can; and, in these days of pseudo publication, without real aim or purpose, a journal like *Art Age*, which aims high and so nearly reaches an ideal is invaluable to the library of an artist, architect or to those in any way interested in art.

Mosaics.

THERE has been no change in the architectural firm of Thomas & Roger of Chicago.

GEO. J. SCHWARZ, well known in the pressed brick interest in Chicago, has connected himself with Lockwood & Kimball.

MESSRS. MERCHANT & CO., the roofing plate dealers, make some interesting statements in their advertisement in this issue, which it will profit architects to read.

HAY & PRENTICE CO., Chicago, have discontinued their down-town office at 175 Dearborn street, and will receive all communications at their general offices, 34 and 36 South Canal street.

ONE of the most recent partnerships in the architectural field is that of Miller & Thain, formed of C. C. Miller and J. A. Thain. With their experience and large acquaintance they may well expect a successful practice.

LIME cartridges are coming into use for blasting purposes. A hole is bored, the limed cartridge inserted, and water is poured over it. The increase in volume of the slaked lime splits and cracks the substance which it is desired to blast.

A DEPOSIT of mineral paint at Clifton, Tenn., is thought to be the largest in the world. It is said to be oily, of a Venetian red color, and that it is better for iron or tin roofs than lead, as it sticks better. It is believed that several million tons can be mined at a cost of 50 cents per ton.

CODDINGTON & HOGG have dissolved partnership, Mr. Coddington retiring from practice. James Oliver Hogg has formed a copartnership with Messrs. Nier & Byran, of Kansas City. They have also opened a branch office in Ft. Smith, Arkansas. The firm is now known as Nier, Hogg & Byran.

MAX I. DRACH, for a number of years chief draftsman for Mr. H. Wolters, the Louisville architect, has recently connected himself with the McDonald Bros., architects, at Louisville, Ky. He is one of the best educated men in the profession, and his addition to the firm of McDonald Bros., will increase, if possible, the high standing of that firm.

MR. RICHARD SMITH, who has for many years been well and favorably known to Chicago architects as a plaster contractor, has removed to Omaha, where he has entered into the manufacture of bricks and will also carry on plaster contracting. Mr. Smith's reputation in Chicago is such that he can be at once taken into the confidence of Nebraska architects.

ALBERT MILLET, brother of L. J. Millet, of Healy & Millet, and chief engineer of Panama Car Company, is now organizing a company for the construction of a cable road in that section of the country after the pattern of the one in Chicago. He is also civil engineering on the Panama canal under M. Ferdinand De Lesseps.

ARCHITECT FREDERICK BAUMANN, of Chicago, has presented to the health department a decidedly novel plan for disposing of the city's dead by way of cremation. His plan is to erect a gigantic mausoleum of stone, with a gradual ascending staircase that could be carried to any height. Thousands of vaults could be arranged in this structure, which could be rented in the same manner as is usual in cemeteries. A huge fire would be kept constantly burning to consume the gases generated by decomposition, the entire building being hollow, and open at the top.

ALL the machinery, tools and stock of the Warren Fire Escape Co., late of Warren, Ohio, manufacturers of Johnson's Patent Portable and Stationary Automatic Fire Escapes, has been removed to Baltimore, Md., where the manufacture will continue with increased facilities under the new name of Warren Fire Escape Co., office No. 5 German street, Baltimore, Md. This life-saving machine, which weighs only about 3½ pounds, 4½ inches in diameter by 2 inches thick, steel case, nickel-plated phosphor bronze works and steel wire cable, with a breaking strain of over 600 pounds, is intended as a safeguard where there is danger of being cut off from escape by fire. The manufacturers are now prepared to execute orders promptly.

IN no line of the mechanical arts is there more skill employed than in the designing and manufacture of gas fixtures, and of the firms whose names are familiarly known to the architects of the country as the best exponents of artistic work in this line that of the Archer & Pancoast Manufacturing Company has become synonymous of all that is artistic, novel and elegant. The West is supplied from the Chicago house, where, under the management of H. G. Willard, large and beautifully appointed salesrooms in which domestic quietness and business facility combine to welcome the visitor and enable architect or client to select that which is most suitable for the adornment of cottage, palace or business structure. The season of finishing and furnishing approaches, and the earliest opportunity to visit this beautiful emporium should not be lost.

Trade Outlook.

OFFICE OF THE INLAND ARCHITECT AND BUILDER, }
September 10, 1886.

The present trade and industrial outlook is encouraging. Building statistics show the country is ahead of last year at this time in the amount invested. Railroad construction is nearly double its last year's August limit. Railroad traffic and earnings show an improvement over 1885. The industries are more prosperous. The output in numerous branches is in excess of last year. Prices for raw and finished products are firmer, and the consumptive capacity is gaining ground steadily in all directions. Money is abundant for all legitimate enterprise, and would be for speculative purposes but for the dangers involved in speculation at this time. Railroad wreckers have ceased to ply their vocation and railroad builders are endeavoring to borrow money to push enterprises in the West and Northwest, where opportunities are offered for safe investment. The margin of profits have declined under necessary competition. This, however, instead of being an evil, is a check to unwise activity. Enterprise needs to be held in check. Business men have learned valuable lessons and have put them in practice, preventing over-production and too rapid expansion of capacity. The advices we have received from all parts of the country point to the one point, namely, that the country's requirements are once more slowly but healthfully expanding, and that prices will be firmer and more regular in the future. Building material of all kinds is in abundant supply. Lumber is cheap and plentiful. The variety is sufficient for all requirements. The trade desires more remunerative prices, but this hope is not likely to be realized. One creditable fact should be mentioned, namely, lumber dealers recognize the wisdom of not over-crowding the markets to the extent of demoralizing prices. The demand for builders' hardware has been exceptionally active. Trade combinations have arrested undue competition. Manufacturing capacity has been increased, and quite a number of establishments have started up in the West. The vast variety of products coming under the head of builders' material, have been increased. New products are being crowded onto the attention of builders, who are not slow to adopt the best results offered. The iron and steel industries are prosperous. Capacity is being increased and prices are improving. The rail makers will make rails enough to relay fifteen thousand miles of track. The pipe makers are oversold for months. The merchant steel maker never had more business booked for future delivery. Considerable material has been contracted for in foreign markets, such as blooms and slabs and furnace products. The production of coal, both anthracite and bituminous, is also in excess of last year. Mill and factory production is generally in excess of last year's figures, and a spirit of enterprise is abroad which will carry the volume of business to even larger proportions next year. Nails are in active demand at \$2.20 for iron and \$2.15@2.25 for steel. Plumbers' supplies have been in improving request in this and most other markets. Exports of copper from New York have fallen off 60 per cent as compared to last year. Pig iron is 21½. Tin and tin plates are quoted active, and the demand for architectural iron throughout the Northwest is quite active, stimulated by the lower prices ruling. Bar iron is \$1.80 for standard bars and \$2.20 for best refined. Galvanized iron, for building purposes is only in moderate request, but the prospects are that the mills will be soon all on full time.

The financial outlook is encouraging. Commercial failures are comparatively rare. The volume of liabilities continue 33 per cent behind last year. Manufacturing interests are much better organized this year than last, and hence there is less competition, less over-crowding and over-trading. Without taking anything for granted it may be safely said that the country is on a safer and stronger footing than ever before, and that the forces at work will carry us with greater activity and into vaster production without danger of depression or reaction. Our reports throughout the country are as encouraging as they could be expected at this season. We append below the latest trustworthy building information received.

Synopsis of Building News.

Abilene, Kan.—Architects Wing & Mahurin, of Fort Wayne, Ind., report: For L. B. Johns, of Fort Wayne, carriage works, main building, brick, 24 by 135 feet, wing from same, 85 by 24 feet, blacksmith shop and store room, 90 by 24 feet, frame, engine room, iron, brick and wood, machine shop, frame, the three in one building, 147 by 30 feet, paint shop, 24 by 100 feet, frame, two-story packing and varnish shop, 76 by 24 feet, frame, body shop, 30 by 60 feet, frame. All frame buildings and all roofs to be covered with iron; estimated cost \$15,000; taking figures.

Akron, Ohio.—Architects Weary & Kramer report two frame dwellings, to cost \$4,000 and \$5,000.

Alma, Mich.—Architects Spier & Rohns, of Detroit, report: For J. O. Lumsden, two-story frame dwelling, 30 by 60 feet, slate roof; cost \$4,500; George Gibson, builder.

Ashland, Ohio.—Architects Weary & Kramer, of Akron, report a frame dwelling; to cost \$5,000.

Ashland, Wis.—Architects Groff & Chamberlin, of Minneapolis, Minn., report: Brick M. E. church; cost \$15,000; under way. For Mrs. S. S. Vaughn, frame dwelling; cost \$5,000; under way. Forsame, three-story library building; cost \$5,000; under way.

Belding, Mich.—Architect O. Waterbury, of Ionia, reports: For Belding Bros., three-story brick silk mill, 45 by 160 feet, boiler room, 19 by 34 feet, tower 18 feet high; cost \$12,000; under way; Claire Allen, builder.

Belleville, Tex.—Architect Eugene T. Heiner, of Houston, reports: Austin County Court House, three-story brick building, 70 by 103 feet, slate roof; cost \$37,500; under way; Henry Kane, of Gonzales, contractor.

Bluffton, Ind.—Architects Wing & Mahurin, of Fort Wayne, report: For G. F. McFarren, two-story dwelling, 36 by 53 feet; pressed brick, slate roof, hot air heat; cost \$5,000; under way; Wm. Creeps, builder.

Bolivar, Tenn.—Architects McDonald Bros., of Louisville, Ky., report: Western Tennessee Hospital for Insane, four-story building, 850 by 450 feet; cost \$300,000; foundations being laid; work done by the day by the commissioners.

Butler, Pa.—Architect C. H. Owsley, of Youngstown, Ohio, reports: For C. G. Christie, brick house; cost \$10,000.

Canfield, Ohio.—Architect C. H. Owsley, of Youngstown, reports: Mahoning county court house, brick; cost \$20,000; Ch. Manser, builder.

Canon City, Col.—Architect George W. Roe reports: Hon. Thomas Macon, of Denver, has purchased the military college building at a cost of \$12,000, and is converting it into a residence, 40 by 60 feet; repairs to cost about \$3,500, are under way. For L. W. Parkhurst, one-story brick dwelling, 27 by 32 feet; cost \$1,100; under way. For G. W. Burch, six-room brick dwelling, 30 by 36 feet; cost \$1,600; under way; Bradbury & Bridwell, builders.

Cassville, Mo.—Architect W. E. Foley, of Springfield, reports: For School Board, two-story brick school building, 48 by 60 feet; cost \$5,450; under way; B. L. Denneson, Neosho, builder.

Canton, Ohio.—Architects Weary & Kramer, of Akron, report: For Denber Watch Case Co., factory building, to cost about \$250,000.

Coleburne, Tex.—Architects Bristol & Clark, of Dallas, report: Two-story city hall building, 102 by 78 feet, frame, metal roof, seven schoolrooms, and a public hall or opera house, seating 650 persons; cost \$14,800; under way; J. H. Vosburg, builder.

Chicago, Ill.—The prediction that the fall would fully make up for the stoppage of work in the spring seems fully verified, and apparently nothing remains of the strikes of three months ago. Bricklayers are getting as high as sixty cents per hour, though other branches remain about as usual. There is every prospect that the amount of building this year will exceed that of last, and though this, at an increased cost with no increase of income, does not promise well for the future, it is hoped that the enforced inaction of the winter season will place building upon a more equitable basis for next year.

Architects John M. Van Osdel & Co. report: For John T. Dale, an eight-story building, 61 by 50 feet, brick, stone trimmings, felt roof, iron channels, beams, etc., skylights, closets, steam heat and power, passenger and freight elevators; to be erected on the corner of Harrison and Dearborn streets and Fourth avenue; A. Lanquist, mason; Nelson, carpenter.

Architect W. J. B. McCullough reports: For Wm. Fitzpatrick, three three-story flats, 24 by 60 feet, brick, stone trimmings, galvanized iron bays and cornices. Now being erected on Ogden avenue, near Polk street; cost \$21,000. For F. Campbell, three two-story flats, 21 by 68 feet, brick, stone trimmings, galvanized iron cornice; cost \$3,000; each under way.

Architect Fred. Keltnerich reports: For M. Prinderville, two-story and basement store building, 36 by 60 feet, at 630 West 12th street, Indiana pressed brick, iron and plate-glass store fronts, felt roof; cost \$6,200; Minter, Scouler & Co., masons; Joseph Poitras, carpenter. For Thos. Seaton, two-story and basement building, 25 by 80 feet, at 463 West Congress street, Trenton pressed brick front, Lake Superior brownstone and ornamental iron trimmings, furnaces, stained glass, cement floors, electric bells, etc.; cost \$7,500; contract not let. For Con. Credon, two-story cellar and attic residence, 21 by 62 feet, at 662 West Ohio street, St. Louis pressed brick, French slate roof, galvanized iron cornice, iron work; cost \$3,750; contract not let. For Mrs. J. Rowder, two-story building, 21 by 48 feet, at 586 13th place, pressed brick, stone trimmings, galvanized iron, plate and stained glass, mantels, etc.; cost \$2,800; contract not let. For Wm. Maher, five three-story and basement houses, 24 by 64 feet, corner of Polk and Nixon streets, buff Bedford stone fronts, felt roof, galvanized iron cornice. Also two three-story flat buildings, 24 by 50 feet, on Nixon street, buff Bedford stone front. For Thos. Fox, two-story and basement building, on corner of Robey street and 13th place, Indiana pressed brick, felt roof, galvanized iron trimmings; cost \$4,000; under way. For Frank Smith, pressed brick building, galvanized iron cornice, plate-glass, etc., to be erected on Western avenue, between Polk and Taylor streets; cost \$14,000; contract not let. For Andrew Whitehead, two-story and sub-cellar building, 23 by 54 feet, at 255 Oakley avenue, St. Louis pressed brick, molded brick trimmings, cornice, etc., felt roof, slate mantels; cost \$3,800; under way; Nic Lutz, mason; Joseph Poitras, carpenter. For Joseph Wurnburg, two-story and basement building, 30 by 50 feet, at 115 Laffin street, Lake Superior brownstone front, galvanized iron cornice, under way. For Joseph Donnelly, three-story and basement and attic store building, 25 by 85 feet, corner of Throop and 10th streets, Indiana pressed brick, limestone trimmings, galvanized iron cornice; cost \$14,000; Mayer Bros., masons; Martin Neimes, carpenter. For D. Ryan, three-story and basement building, 24 by 72 feet, at 436 West 12th street, Indiana pressed brick, stone trimmings, galvanized iron cornice; cost \$5,500; under way; O'Connell, mason; John Maher, carpenter. For Wm. Schultz, two-story building, 25 by 55 feet, at 406 Armitage avenue, Indiana pressed brick, galvanized iron cornice; cost \$3,000; under way. For same, two-story and basement store building, 24 by 62 feet, at 404 Armitage avenue, Indiana pressed brick; contract not let. For Patrick Fitzgibbon, three-story and basement store building, corner of 14th and Morgan streets, Indiana pressed brick, galvanized iron cornice; cost \$5,200; contracts not let. For Daniel M. Simmons, three-story and basement store building, 24 by 70 feet, at 840 West 12th street, St. Louis pressed brick, stone trimmings, galvanized iron cornice, iron and plate-glass store front; cost \$5,500; Wm. Maher, mason; Wm. J. Donohoe, carpenter. For Thos. Martin, three-story flat building, 24 by 54 feet, at 630 West Taylor street, St. Louis pressed brick, Lake Superior brownstone trimmings, galvanized iron cornice; Wm. Maher, mason; Constantine & Dyer, carpenters.

Architects Furst & Rudolph report: For R. W. Healy, three-story store and flats, 50 by 80 feet, on Archer avenue; St. Louis pressed brick, Bedford stone trimmings; cost \$16,000; under way; J. E. Kavanagh, builder. For B. Gull, two-story store and flats, 50 by 60 feet, corner Twelfth street and Ashland avenue; stone fronts; cost \$17,000; under way; Geo. Lehman & Sons, masons; Thos. Clark & Son, carpenters. For Louis Roeder, two-story building, corner of Laffin and Twelfth streets; cost \$10,000; W. Zulesdorf, mason; Reutner Bros., carpenters. For John Borgwardt, four-story store and flat building, 24 by 75 feet, at 1021 Milwaukee avenue; St. Louis pressed brick; brownstone trimmings; cost \$5,000; under way; G. Krieg, mason; F. Schultz, carpenter.

Architect Adam F. Boos reports: For J. Lunkes, three-story and basement store and flats, 24 by 103 feet, corner of Clybourne and Fullerton avenues; Anderson pressed brick, Bedford stone trimmings, marble mantels, hardwood finish; cost \$13,000. For A. F. Pogge, two-story store and flats, 27 by 66 feet, at 618 Elston avenue; Indiana pressed brick, Lemont stone trimmings; cost \$6,000; contract not let. For Julius Frank, three-story stores and flats, 70 by 38 feet, at corner of Vine and Vedder streets; Indiana pressed brick, Lemont stone trimmings; cost \$12,000; P. Jung, carpenter.

Architect G. Thiele reports: For Dr. Emerick, three-story stores and flats, on corner of Ashland and North avenues; Indiana pressed brick, Lemont stone trimmings; cost \$25,000. For Dr. Dahl, two-story dwelling, 24 by 60 feet, on North Lincoln street; Philadelphia pressed brick, brown and Bedford stone trimmings; cost \$6,000; contracts not let. For M. Weber, three-story store and flat building, 24 by 60 feet, on Milwaukee avenue; St. Louis pressed brick, Lemont stone trimmings; cost \$5,000; contract not let.

Architect John Otter reports: For J. Wiemann, three-story flats, 22 by 62 feet, at 409 Belden avenue; Anderson pressed brick, stone trimmings; cost \$10,000; under way; P. Olsen, mason; G. J. Hall, carpenter.

Architect W. G. Barfield reports: For Hickson & Jukes, seven two-story apartment houses, corner of Fullerton avenue and Berling street; Anderson pressed brick, terra-cotta trimmings; cost \$20,000; contracts not let. For Da Costa, alterations at 75 Clark street; cost \$5,000; under way. For W. G. Barfield, two-story dwelling, 22 by 54 feet, at 1022 Park avenue; Anderson pressed brick, terra-cotta trimmings; cost \$4,000; under way; Wm. Dykeman, mason; P. Gaylord, carpenter.

Architect S. M. Randolph reports: For N. Rutherford, three two-story dwellings, 29 by 60 feet, 33 and 35 Depyster street; Indiana pressed brick; cost \$9,000; under way; J. Rutherford, builder.

Architect H. R. Wilson reports: For H. Beck, three two-story dwellings, 50 by 66 feet, on Groveland avenue; Lake Superior brownstone fronts; cost \$9,000; under way; H. Morgan, mason.

Architects Bauer & Hill report: For A. Corwith, two-story building, 99 by 72 feet, rear of Market and Madison streets; cost \$7,000; under way; C. Prier, mason.

Architect J. F. Doerr reports: For John Joehm, three-story store and flats, at 3701 State street; Indiana pressed brick, Lemont stone trimmings; cost \$9,000; under way; H. Appel, mason.

Architect H. Hildenger reports: For A. Timroth, three-story stores and flats, 124 by 24 feet, on Ogden avenue and Taylor streets; Anderson pressed brick, Bedford stone trimmings; cost \$12,000. For C. Happel, two-story flats, 22 by 50 feet, Thirteenth street near Loomis; cost \$3,500; Indiana pressed brick, Lemont stone trimmings.

Architect Wm. Longhurst reports: For P. Miller, three-story flats, 23 by 70 feet, at 3435—3437 Wentworth avenue; St. Louis pressed brick, stone trimmings; cost \$7,000.

Architects Bruhus & Woelner report: For L. Woerner, two-story building, 84 by 60 feet, at Garfield Park and Madison street; Anderson pressed brick; cost \$10,000. For F. Hoerd, two-story frame building, 84 by 50 feet, corner of Belmont and Ashland avenues; cost \$7,000; E. Griesbach, carpenter.

Architect P. W. Ruehl reports: For Mrs. Bichel, three-story flat building, 21 by 60 feet, on Taylor street near Winthrop Place; St. Louis pressed brick, Lake Superior brownstone trimmings; cost \$8,000; Conrad Kies & Son, masons; John A. Wolf, carpenter. For T. C. Cawder, six two-story stores and flats, 135 by 65 feet, corner Thirty-fifth street and Forrest avenue; St. Louis pressed brick, Lemont stone trimmings; cost \$20,000; contracts not let.

Architect R. G. Pentecost reports: For H. Sweet, five three-story flat buildings, 111 by 58 feet, at the corner of Laffin and York streets; pressed and molded brick, brownstone trimmings; cost \$30,000; also preparing plans for about fifty cottages to be erected on Homer street and Armitage avenue, at a cost of about \$65,000, for the same party. For J. Gruenfeldt, store building, 50 by 60 feet; cost \$4,500.

Architect August Bessler reports: For Chas. Schurn, two-story and basement storage building, 30 by 35 feet, corner of Ashland avenue and Thirteenth Place; cost \$3,500; under way. For Mrs. Mary Holland, two-story and basement dwelling, 21 by 68 feet, at 660 West Twentieth street; Indiana pressed brick, stone trimmings; cost \$4,300; under way. For Jos. Rivers, two-story flats, 21 by 48 feet, on South Wood street near Twelfth street; Indiana pressed brick, stone trimmings; cost \$3,300; under way.

For Jos. Hemmings, three-story and basement store building, 40 by 65 feet; Indiana pressed brick, stone trimmings; cost \$11,000; under way. For Mr. Eierdamm, at Lawndale, cottage, 23 by 45 feet; cost \$2,500; under way. For John Paul, two-story dwelling, 23 by 56 feet, on Ambrose near Robey street; Indiana pressed brick, stone trimmings; cost \$3,500; under way. For Henry Shirding, three-story and basement store building, 25 by 85 feet; St. Louis pressed brick, stone trimmings; cost \$10,000; under way.

Architect Clinton J. Warren reports: For Wm. Trego, two-story and attic basement residence, 35 by 60 feet, Woodlawn avenue, near Forty-seventh street, Random Range stone basement, Anderson pressed brick first story, red slate second story, blue slate roof, galvanized iron cornices, hardwood finish, closets and bath, stained and bevel plate glass, steam heat, wood mantels, tiling, electric bells, speaking tubes, stable; cost \$14,000; under way; Lane, mason; Kelly Bros., carpenters.

Architect C. H. Gottig reports: For Henry Kehl, two-story cottage, 22 by 46 feet, on Montana street, frame building, hardwood finish, closets, bath, stained glass and mantels will be used; cost, \$2,000; to be commenced at once. For L. B. Mantonga, three-story and basement residence, 25 by 76 feet, on Dearborn avenue, Milwaukee pressed brick, Kasota pinkstone trimmings, all modern improvements, also stable; cost, \$20,000. For F. Spiegel, four-story store and flat building, 50 by 70 feet, 446—448 W. Lake street, pressed brick front, brownstone trimmings, galvanized iron cornice, stained glass, skylights, closets, bath, hardwood finish, tiling, hot air heat, mantels, bells, speaking tubes, dumb waiters, etc.; cost, \$18,000; under way; George Schneider, mason; Henry Brebach, carpenter.

Architect L. G. Hallberg reports: For Wm. H. Stoelker, two four-story and basement residences, 26 by 57 feet, on La Salle avenue, stone and brick, galvanized iron cornices, slate roof, hardwood finish, wood mantels, hot air heat, closets and bath, stained glass, skylights, electric bells, speaking tubes; cost \$12,000; to be commenced at once. For John McEwan, two three-story and basement residences, 35 by 80 feet, on La Salle avenue, stone and brick, galvanized iron cornice, slate roof, skylights, stained glass, closets and bath, steam heat, hardwood finish and tiling, wood mantels, electric bells and speaking tubes, to be commenced at once. For C. W. Senec, three-story flats 25 by 56 feet, on Belden avenue, near Larrabee street, Milwaukee pressed brick, stone trimmings, slate roof, galvanized iron cornice, wood mantels, closets and bath, skylights, stained glass, etc.; cost \$6,000; under way; C. W. Hellman, mason; X. R. Aube, carpenter. For Dr. C. W. Hunt, three-story flats, 53 by 25 feet, on Division, near State street, brick, stone trimmings, slate roof, galvanized iron cornices, skylights, stained glass, closets and bath, steam heat, hardwood finish and tiling, wood mantels, electric bells, speaking tubes; cost \$8,000; under way; C. W. Hellman, mason; X. R. Aube, carpenter. For Swedish Lutheran Church, brick and stone building, 93 by 100 feet, Market and Whiting streets, slate roof, galvanized iron cornices, iron beams, columns, etc., hardwood finish, stained glass, hot air heat; cost \$25,000; taking figures.

Architect W. L. Carroll reports: For L. H. Fluke, two-story frame dwelling, 24 by 32 feet, at Englewood; cost \$3,000. For A. C. Graham, two-story brick residence, 22 by 48 feet, 1546 Warren avenue, red sandstone trimmings; cost \$3,500; completed. For Tom Mackin, alterations and additions, 32 by 25 feet, four-story and basement residence block, 280 Indiana street; cost \$3,000; plans in preparation. For Antonio Sucrone, three-story and basement apartment building, 25 by 52 feet, 102 Indiana street; cost \$5,000; nearly completed. For Aaron McKay, two-story frame residence, 30 by 48 feet, at Ravenswood; cost \$3,000; under way; also making plans for alterations and additions to frame house, corner Lincoln and Monroe streets; cost \$2,500.

Architect C. L. Stiles reports: For Davis & Rankin, five-story warehouse, 120 by 100 feet, at 240 to 248 West Lake street; Anderson pressed brick; cost \$60,000; under way; Barney & Rodatz, masons.

Architect C. M. Palmer reports: For J. J. Gore, two-story dwellings, 50 by 72 feet, at 2623 Wabash avenue; stone fronts; cost \$16,000; under way; J. Boydell, mason; H. H. Roberts, carpenter.

Architect E. E. Snyder reports: For J. N. Cuning, three-story stores and flats, 40 by 64 feet, on State near Indiana street; Anderson pressed brick, Carbondale brownstone; cost \$20,000; contracts not let.

Architect Geo. Beaumont reports: For Minnie Wiese, two-story dwelling, 25 by 67 feet, at 3121 Vernon avenue; St. Louis pressed brick, Lake Superior brownstone; cost \$10,000; under way; F. Blair, builder. For Enos Ayers, four two-story dwellings, corner of Ada and Fulton streets; Indiana pressed brick, stone trimmings; cost \$13,000; under way; John Pedgrift, mason; August Briebach, carpenter. For Tom N. Donnelly, two-story dwelling, 22 by 60 feet, at 3144 South Park avenue; Indiana pressed brick; cost \$7,000; under way.

Architect A. D. Huesdale reports: For A. H. Revell, three four-story stores and flats, 65 by 60 feet, 355 to 359 North Clark street; Anderson pressed brick, Portage brownstone; cost \$26,000; under way. For J. Williamson, three-story flats, 50 by 44 feet, on Robey street, near Harrison street; Indiana pressed brick, Portage brownstone; cost \$10,000.

Architect G. Isaacson reports: For Geo. A. Johnson, three four-story stores and flats, 67 by 50 feet, 212 to 216 West Indiana street; Anderson pressed brick, Hummelston stone trimmings; cost \$20,000; under way; G. Gilbert, mason.

Architects Cobb & Frost report: For C. R. Keith, three story dwelling, 38 by 80 feet, 1803 Prairie avenue, granite front; cost \$40,000; John Angus, mason. For E. H. Van Ingen, three two-story dwellings, 57 by 60 feet, corner of La Salle avenue and Maple street; cost \$15,000. For J. T. Hammond, two-story stone front dwelling, 43 by 43 feet, on Bellevue place; cost \$20,000.

Architects Willet & Pashley report: For Whitman & Barnes Mfg. Co., five-story warehouse, 80 by 130 feet, on West Monroe street; cost \$70,000; Thomas Nicholson, mason; Blonden & McDonald, carpenters.

Architects Thomas & Rodger report: For Dr. A. Brooks, three three-story stores and flats, 68 by 80 feet, 1623 Wabash avenue; cost \$25,000; under way; John Angus, mason; Steinmetz & Eilenberger, carpenters. For James Walsh, three-story pressed brick residence, corner Pine and Erie streets; cost \$30,000; contracts not let.

Architect S. V. Shipman reports: For Grant Goodrich, two-story flat building, 44 by 65 feet, 2327 Dearborn street, Anderson pressed brick; cost \$12,000; under way.

Architect H. R. Wil-on reports: For C. G. Gregory, block of five two-story dwellings, 100 by 60 feet, on South Park avenue; cost \$50,000; Fox & Hinds, masons; W. M. Loughlin, carpenter.

Architect H. B. Seeley reports: For A. T. Ewing, six-story warehouse, 88 by 144 feet, 264—70 Fifth avenue, Anderson pressed brick; cost \$60,000; under way; L. A. Dagcling, mason; Goldie & Son, carpenters.

Architect L. G. Quackenboss reports: For Dr. R. L. Rea, two-story residence, 28 by 50 feet, at 272 Huron street, stone front; cost \$18,000; under way; George Hinch-cliff, mason; Diez & Peters, carpenters.

Architect L. B. Dixon reports: For Henry Hoyt, two-story stone front dwelling, 32 by 70 feet, on Calumet avenue; cost \$12,000. For M. Uebele, three-story dwelling, 25 by 52 feet, at 3728 Dearborn street, Indiana pressed brick; cost \$7,000; under way.

Architect Julius H. Huber reports: For Adam Schaaf, two-story brownstone front dwelling, 25 by 56 feet, on West Jackson street; cost \$15,000; contracts not let. For F. Adler, three-story store and flats, 25 by 92 feet, on State near Thirty-second street, Trenton pressed brick, brownstone trimmings; contract not let.

Architect H. Rehboldt reports: For Mrs. S. Gleason, three-story store and flat building, 48 by 55 feet on Thirty-first street, Indiana pressed brick, Lemont stone trimmings; cost \$12,000; under way.

Architect Fred Ahlschlager reports: For German Lutheran Society, stone and brick church, 53 by 100 feet, corner of James avenue and Ullman street; cost \$30,000; contracts not let. For Mrs. Newman, block of five three-story stores and flats, 60 by 125 feet, corner Sixty-third street and Stewart avenue, brick, stone trimmings; cost \$43,000; under way; Alfred Wenberg, mason; E. B. Peterson, carpenter.

Architect C. Hine reports: For Turner & Bond, seventeen cottages, 22 by 40 feet each, on Oakley avenue, Raleigh street and vicinity, Indiana pressed brick; cost \$31,000.

Dearborn, Mich.—Architects Spier & Rohns, of Detroit, report: For Michigan Central Railroad Company, one and one-half story frame depot, 60 by 23 feet; slate roof, terra-cotta fireplace, hardwood finish, etc.; cost \$4,000.

Delphos, Ind.—Architects Wing & Mahurin, of Fort Wayne, report: For Jacob Werner, pastor, Lutheran church, 35 by 80 feet, brick, slate roof, spire 125 feet high; cost \$8,000; under way; Christ. Hitts, builder.

Detroit, Mich.—Architects Scott & Co., report: For A. G. Alexander, two-story double dwelling, 36 by 56 feet, brick, stone trimmings, gravel roof; cost \$5,000; Wright & Newton, builders. For William C. Colburn, three-story dwelling, 20 by 65 feet, brick, stone trimmings, gravel roof; cost \$6,000; Harry Chandler, builder. For John Graves, two-story dwelling, 35 by 32 feet, brick, stone trimmings; cost \$2,500; James Beattie, builder.

Architects Mason & Rice report: For Berry Bros., two-story store house, 76 by 115 feet, brick, gravel roof; cost \$10,000; George A. Dupuis, builder. For Mrs. H. A. Clark, two-story double dwelling, 52 by 78 feet, brick, stone trimmings, slate roof; cost \$12,000; projected. For Sacred Heart Parish, two-story school building, 38 by 50 feet, brick, stone trimmings, slate roof; cost \$5,000; projected. For S. G. Caskey, block of three-story double store and dwellings, 40 by 60 feet, brick, stone trimmings, gravel roof; cost \$12,000; Topping & Fisher, mason; Spitzley Bros., carpenters. For George Hendrie, three-story frame dwellings, 50 by 60 feet, interior finished in hardwood; cost \$12,000; Gideon Vivier & Son, builders. For John B. Dyar, three-story frame dwelling, 50 by 60 feet, interior finished in hardwood; cost \$7,000; Dumas & Ovielle, builders.

Architect W. E. Brown reports: For Edward Smith, three-story and basement dwelling, 50 by 100 feet, Ohio buffstone walls, cornices, gables, etc. Will be an elegant residence, with all modern improvements, to be erected on Woodward avenue; only contract let for the stone work; Batchelder & Long contractors; cost of building not given.

Architects Hess & Raseman report: For Edison Electric Light Co., two-story factory building, 70 by 100 feet, brick, gravel roof; cost \$16,000; M. Scholl & Son, masons; Chandler Bros., carpenters; Young & Letts, stone.

Architect A. E. French reports: For St. Anne's Parish, three-story parochial residence, 40 by 76 feet, brick, stone trimmings, slate and tin roof; cost \$10,000.

Architects Donaldson & Meier report: For E. Aertz & Co., two-story double store building, 40 by 100 feet, brick, stone trimmings, gravel roof; cost \$5,000; M. Blay & Son, builders.

Architects Spier & Rohns report: For David Sutherland, two-story frame dwelling, 24 by 55 feet, second story and roof shingles; cost \$3,000. For Charles Gorham, additions and alterations to brick dwelling, 20 by 30 feet; cost \$4,000.

Messrs. Kitchen & Lewis are building for themselves fourteen frame dwellings, 20 by 40 feet; cost \$22,400.

George E. Depew is building six two-story frame dwellings, 26 by 54 feet; cost \$14,700.

A two-story brick school house, 40 by 60 feet, is being erected; cost \$7,000.

Messrs. Gideon Vivier & Son are building for themselves five brick dwellings; cost \$7,000.

John Willis is building for the Detroit Street Railway Co. a two-story frame car house and barn, 60 by 268 feet; cost \$4,000.

Building permits were issued during the month of July for new buildings to cost \$258,060; alterations, etc., cost \$20,250; total cost \$278,310.

Dubuque, Iowa.—Architect F. D. Hyde reports: For J. K. Graves, Fourth street elevator station and engine house, two-story frame, 20 by 30 feet; cost \$1,000; under way; John Bell, builder. For John R. Waller, three-story store building, 20 by 114 feet, pressed brick and terra-cotta front; cost \$6,500; under way.

Eddyville, Ky.—Architects McDonald Bros., of Louisville, report: Branch Penitentiary building, 600 by 400 feet; cost \$500,000; under way.

El Paso, Tex.—Talk of war has stopped building enterprises to some extent.

Architect E. Krause reports: For Marx, Blum & Shuster, three-story brick store building, 44 by 120 feet, rock basement; cost about \$30,000; under way; Smith, Fernandis & Wright, builders. For Mr. Phillips, two-story and basement brick and stone store building, 60 by 100 feet; cost \$19,000; under way; Saul & Co., builders. For Mr. Bronzen, two-story and basement brick and stone store building, 120 by 100 feet; cost \$34,000; under way; Rallenberry & Spencer, builders. For Joseph Shultz, three-story and basement brick and stone store building, 45 by 135 feet; cost \$21,000; under way; Buchanan & Co., builders. For Mr. Lackten, two-story brick and stone store building, 60 by 120 feet, rock basement; cost \$23,000; under way; Buchanan & Co., builders. For Dieter & Co., two-story and basement brick and stone store building, 80 by 100 feet; cost \$20,000; under way. Brower, builder. For George Look, one-story store building, 20 by 100 feet; under way; Sorenzen, builder. For C. Q. Stanton, two-story brick lodging house, 65 by 40 feet; cost \$3,500; Burton, builder. For same, one-story brick store, 24 by 68 feet; cost \$2,000; under way; Burton, builder. For A. Burton, two-story brick dwelling, 37 by 50 feet; cost \$3,500; under way; Burton, builder. For A. Hille, two-story brick and basement dwelling, 21 by 36 feet; cost \$2,800; under way; Burton, builder. For W. G. Warren, one-story factory building, 50 by 75 feet; cost \$1,800; Fruin, builder. For Mr. Provencio, two-story brick dwelling, 32 by 40 feet; cost \$3,400; Rallenberry & Spencer, builders. For C. Q. Stanton, one-story brick dwelling, 40 by 60 feet; cost \$3,000. For Ketelson & Degetan, one-story brick dwelling; cost \$4,000; under way. For Mrs. R. Stely, four two-story, brick stores, 91, by 45 feet; cost \$6,000; under way. Also several smaller dwellings.

Essex Center, Mich.—Architects Spier & Rohns, of Detroit, report: For Michigan Central Railroad Company, one and one-half-story frame depot, 80 by 22 feet, slate roof, terra-cotta fireplace, hardwood finish, etc.; cost \$4,500.

Fort Wayne, Ind.—Architects Wing & Mahurin report: For Charles Centlivier, two-story frame cottage, 31 by 50 feet, slate roof; cost \$4,000; under way; Fred Kraft, builder; also frame boat house, 26 by 28 feet; cost \$1,000. For Mrs. Hattie Tolan, two-story frame cottage, 32 by 45 feet; cost \$2,000; A. H. Grothaltman, builder. For Charles Weller, two-story frame cottage; cost \$2,000; under way; William Ruchel, builder. For Henry Drower, repairs, etc.; cost \$2,000; projected. For Jacob Beattie, two-story brick dwelling, 32 by 35 feet, slate roof; cost \$2,500; under way; owner is the builder.

Garrettsville, Ohio.—Architect S. W. Foulk, of Newcastle, Pa., reports: Congregational church, two-story brick veneered building, slate roof; cost \$7,000.

Hillsboro, Tex.—Architects Bristol & Clark, of Dallas, report: City Hall and school building, two-story brick, metal roof and cornice; cost \$11,400; under way; Hughes & Boswell, builders.

Hinsdale, Mich.—Architect Joseph E. Mills, of Detroit, reports: For City of Hinsdale, two one-story school buildings, each 66 by 40 feet, brick, stone trimmings, slate roof; cost of both \$6,000; George P. Wolf, builder.

Jackson, Neb.—Architect G. G. Baldwin, of Sioux City, Iowa, reports: For Independent School District, brick school house, 40 by 60 feet, tin roof; cost \$5,000; under way; Severson & McMill, builders.

Kansas City, Mo.—Architect E. F. Fassett reports: For Frank Stophlett, two-story brick dwelling, 32 by 32 feet; cost \$5,000; under way. For O. H. Queal, two-story frame dwelling, 35 by 50 feet; cost \$5,000; under way. For A. T. & S. F. R. R., one-story frame depot, 18 by 53 feet; cost \$800; under way.

Architects Tinsley, Ramsden & Gooch report: Brick block of ten houses, three stories and basement, red sandstone trimmings; cost \$30,000; contracts let. For Colonel R. H. Hunt, eighteen sets of plans for flats in different parts of the city, on the boards,

brick, stone trimmings; cost \$75,000. For same, five houses, brick and open timber, with rough cast plaster fronts; cost \$11,000; contracts let. For L. Hammersburgh, remodeling store; cost \$10,000; contract let. For D. B. McMechan, six brick and stone houses; cost about \$25,000; under way. For Dr. T. J. Eaton, frame dwelling; cost \$4,500. For B. R. Bacon, remodeling house; cost \$4,000. For same, brick and frame barn; cost \$1,500. For Mrs. Mary Beck, frame dwelling; cost about \$3,500. For B. Donnelly, residence; cost \$25,000.

Architects Burnham & Root, of Chicago, Ill., are preparing plans for a large building to be erected for the Y. M. C. A.

Plans have been made for St. Mary's church, to be erected at the corner of Holmes and Thirteenth streets, at a cost of \$35,000.

The New England Mutual Insurance Co. propose to build a \$250,000 stone building; 90 by 130 feet.

Messrs. Lathrop & Smith are erecting a five-story fireproof building, 50 by 116 feet, on the corner of Sixth and Wyandotte streets. Messrs. Adams & Thayer and Bard & Welch are to build a four-story stone front business block on Main street. It will have a frontage of 200 feet; brick, stone and iron will be used in the construction, and the building will have all modern improvements.

Architects Nier, Hogg & Bryam report: For H. D. Wright, brick residence; cost \$8,000; under way; J. Sharp, builder.

Lebanon, Ind.—Architect J. W. Hammond, of Frankfort, reports: Remodeling brick M. E. Church, slate roof; cost \$3,500; under way; Daniels & Palmer, of Frankfort, contractors.

Little Rock, Ark.—Architect Max Olopp has prepared plans which have been accepted for the Pulaski county court house, brick and stone building, two and one-half stories high, fire-proofed; cost \$50,000.

Architect Thomas Harding: For R. W. Dawson, brick veneered building, 60 by 140 feet; cost \$6,000; J. Beattie, contractor.

Bids called for till October 10, 1886, for County Court House for Pulaski county, at Little Rock, Ark. W. F. Hill, county judge, brick and stone building; estimated cost, \$50,000; W. A. Orlopp, Little Rock, architect. Office for Pulaski Gas Light Company, brick, 40 by 40 feet; estimated cost, \$3,000; Rickow & Harris, architects.

Livingston, Tex.—Architect Eugene T. Heinen, of Houston, reports: Polk county jail, two-story brick building, 28 by 54 feet; cost \$9,000; contract to be let September 10.

London, Ky.—Architects McDonald Bros., of Louisville, report: Brick and stone court house, 60 by 75 feet; cost \$17,000; under way; J. W. Mullens, contractor.

Louisville, Ky.—Architects McDonald Bros. report: For the Southern Baptist Theological Seminary, one dormitory building, 260 by 160 feet, four-stories high, brick, terra-cotta trimmings, all modern conveniences, contracted for \$64,500; separate contracts; foundation under way. For Y. M. C. A., gymnasium building, 40 by 90 feet; cost \$5,000; under way; John Baumeister, contractor.

Marlin, Tex.—Architect Eugene F. Heiner, of Houston, reports: Falls county court house, three-story brick building, 76 by 118 feet; cost \$47,493; contract let August 19 to A. Baumbach, of Houston.

Marshall, Mich.—Architects Spier & Rohn, of Detroit, report: For C. T. Cook, two and one-half-story brick and stone dwelling, 40 by 60 feet, slate roof; cost \$8,000; S. H. & J. H. Egerton, builders.

Middlesex, Pa.—Architect S. W. Foulk, of Newcastle, reports: Presbyterian church, two-story brick, stone trimmings, slate roof; cost \$6,500.

Minneapolis, Minn.—Architect Warren H. Hayes reports: Present outlook is favorable for several large buildings to be started this fall, from my sketches. Have at present under way, the First Congregational Church, 98 by 142 feet; Lake Superior brownstone, broken ashlar; cost \$55,000; under way; Geo. Summers, builder.

Architects Groff & Chamberlin report: Present condition and outlook for. For J. B. Crocker, two and one-half story frame; cost \$10,000; under way. For W. H. Groff, two and one-half story frame; cost \$15,000; under way. For P. G. Lamaroux, three-story brick and stone building; cost \$25,000; under way. For R. E. Grafton, three-story brick building; cost \$25,000; projected. For same, three-story brick; cost \$20,000; under way. For Chas. Oliver, frame dwelling; cost \$5,000; under way. For Samuel Davis, frame dwelling; cost \$6,000; under way. For L. Groff, frame dwelling; cost \$5,000; completed. For F. C. Penny, two and one-half story brick, tile and slate house; cost \$8,000. For J. H. Paul, three-story double house; cost \$8,000; projected. For L. S. Gillette, two and one-half story double brick and frame house; cost \$15,000. For F. G. J. G. Myers, frame dwelling; cost \$6,000; under way. For Crocker & Groff, two frame dwellings; cost \$5,000; under way. For A. Bates, frame dwelling; cost \$5,000; under way. For A. G. Bigelow, frame dwelling; cost \$3,000; completed.

Flink & Johnson, three-story wood and brick store and dwelling, 704 Cedar avenue; cost \$6,000. E. S. Woodworth, two-story wooden dwelling, 1601 Linden avenue; cost \$5,000. E. B. Chement, two-story frame dwelling, 1603 Linden avenue; cost \$5,000. Masonic Temple Association, eight-story brick and stone building, Sixth street and Hennepin avenue; cost \$200,000. Hall and Ducey, one and one-half-story brick and stone planing mill, Sixth street and Third avenue north; cost \$10,000. West and Stevens two-story frame dwellings, 2118 and 3120 Bryant avenue south; cost \$10,000. A. Kelly, five three-story brick dwellings, 1213-1221, Hawthorne avenue; cost \$30,000. H. C. Pearson, two-story frame dwelling, 3101-3105 Garfield avenue; cost \$6,000. J. G. Gluck, two-story brick veneer dwelling, 1838 Hennepin avenue; cost \$8,000. C. A. Anderson, two two-story frame dwellings, 2832-2838 Garfield avenue south, \$6,000. Western Avenue Methodist Church, frame church building, 1500 Western avenue; cost \$6,000. W. H. Lyon, two and a half-story frame dwelling, 638 Elwood avenue north; cost \$20,000. E. G. Pattee, two-story frame dwelling, 203 Cedar Lake avenue; cost \$5,000. C. E. Rogers, five two-story frame dwellings, 201 and 209 Fourth avenue N. E.; cost \$7,500. G. R. Kirkbride, two-story frame dwelling, 2200 First avenue south; cost \$5,000. Ingram, Olson & Co., remodeling store building, 212-215 Nicollet avenue; cost \$10,000. W. A. Fuller, three three-story brick tenements, 1119 Hennepin avenue; cost \$12,000. J. Lussier, two two-story frame dwellings, 619, 627 Penn avenue north; cost \$10,300. P. J. Lamoreaux, six three-story brick, stone and wooden tenements, Eighth avenue and Lyndale; cost \$27,000. R. H. Jones, five three-story brick store and dwelling buildings, Franklin avenue E.; cost \$24,000. Northwestern Hospital Association, three-story brick hospital building; cost \$30,000. Mrs. M. E. French, two-story frame dwelling, 1787 Hennepin avenue; cost \$8,000. W. H. Tripp, two two-story frame dwellings, 2924-2928 Pleasant avenue; cost \$7,000. Minneapolis, Lyndale & Minnetonka Railway Company, engine house, machine shop, car house and coal shed, Thirty-first street and Blaisdell avenue; cost \$40,000. Joseph Campbell two two-story frame dwellings, 3008-3010 Garfield avenue; cost \$7,000. E. M. Cannon, two-story dwelling, 1516 Lake street east; cost \$5,000. H. T. Wells, three-story brick veneer dwelling, 1731 Hennepin avenue; cost \$25,000. S. P. Clark, three two-story frame dwellings, 2624-2628 Seventeenth avenue south; cost \$7,500. F. L. Mortimer, three-story brick dwelling and barn, Lyndale avenue and Fifty-fourth street; cost \$11,800. G. H. Brown, two double two-story brick veneer dwellings, 800-804 Lake street west; cost \$12,000. H. W. Taylor, two two-story frame dwellings, Seventeenth street, between Hawthorne and Linden avenues; cost \$6,000. First Congregational Church Society, church building, 800 Fifth street S. E.; cost \$55,000. C. Sullivan & C. O. Anderson, three three-story brick stores and dwellings, 1025, 1028 Washington avenue south; cost \$20,000.

Moberly, Mo.—Architects Nier, Hogg & Bryam, of Kansas City, report: For Board of Education, brick school building, 60 by 72 feet; cost \$10,000; under way.

Mount Vernon, Mo.—Architect S. B. Abbott, of North Springfield, reports: For School Board, brick school building, 32 by 64 feet, with two wings, 16 by 25 feet, stone trimmings, galvanized iron cornice, hot air heat; cost \$6,000; under way.

Mulberry, Ind.—Architect J. W. Hammond, of Frankfort, reports: Frame cottages for John Steckle and Emanuel Mitman; cost about \$1,200 each; under way; A. A. Bayles, of Frankfort, contractor.

Norfolk, Va.—Architect S. W. Foulk, of Newcastle, Pa., reports: For Young Men's Christian Association, four-story brick building, granite and terra-cotta trimmings; cost \$32,000; nearly completed. For James Plallis, two-story frame dwelling, slate roof; cost \$2,000.

Architects J. T. Moulton & Son, of Chicago, Ill., report: For Norfolk & Western R. R. Co., grain elevator, 60 by 87.6 feet, storage capacity 150,000 bushels; cost \$60,000; under way; J. T. Moulton & Son, architects, contractors and builders.

North Springfield, Mo.—Architect S. B. Abbott reports: For Second Presbyterian Church, chapel, pressed brick and stone, slate roof, lecture room 30 by 50 feet, other room 16 by 26 feet; cost \$3,500; under way. For Mr. Fay, alterations and additions; cost \$2,000; under way; D. E. Davis, contractor.

Oberlin, Ohio.—Architects Weary & Kramer, of Akron, report: For E. A. Webster, store building; cost not given.

Oskaloosa, Iowa.—Architect E. Clark, of Ottumwa, reports: For A. P. Spencer, two-story basement and mansard residence, 34 by 54 feet, brick basement, furnace heat; cost \$3,500; taking figures.

Ottumwa, Iowa.—Architect E. Clark reports: For A. D. Smith, two-story dwelling, 22 by 38 feet, frame; cost \$1,200. For R. T. Shea, remodeling residence; cost \$800; under way.

Parsons, Kan.—Architects Nier, Hogg & Bryam, of Kansas City, Mo., report: For Angell, Mathewson & Co., three-story brick hotel building, 122 by 100 feet; cost \$30,000; preparing plans.

Pierce City, Mo.—Architect W. E. Foley, of Springfield, reports: For the city, two-story brick building, 25 by 75 feet; cost \$3,200; under way; Max Andred, builder.

Richmond, Ind.—Architect John A. Hasecoeter reports: Business is improving. For A. L. Pogue, two-story stone front business block, 48 by 122 feet, slate and tin roof; cost \$9,300; projected. For Wm. H. Suddhof, two-story brick dwellings, stone trimmings, slate roof, all modern improvements; cost \$3,500; projected. For Frank Smelser, two-story frame cottage; cost \$1,500; projected.

Rushville, Ind.—Architect J. W. Hammond, of Frankfort, reports: For Methodist Episcopal Church, brick building, 70 by 96 feet, trimmed with ornamental brick, slate roof; cost \$15,000; under way; Chas. H. Hoffman, of Indianapolis, contractor.

Salem, Ind.—Architects McDonald Bros., of Louisville, Ky., report: For Washington County Court House, three-stories and tower, 90 by 72 feet; to be built of limestone, fireproofed; cost \$60,000; Crambaugh & Metchn, contractors.

Salem, Iowa.—Architect I. C. Wykoff, of Keokuk, reports: For John Bickster, stone and brick store and bank building, 42 by 60 feet; cost \$4,000; under way. For J. C. Reeves, one-story brick store building, 20 by 80 feet; cost \$1,500; under way.

Savannah, Ga.—Architects McDonald Bros., of Louisville, Ky., report: Three-story brick, stone and iron jail building, 75 by 150 feet; cost \$60,000; Wm. F. Bowe, contractor; work under way.

Sioux City, Iowa.—Architect G. G. Baldwin reports: For E. Higman, three-story brick block, 50 by 150 feet, stone trimmings, tin roof, iron girders and pillars; cost \$28,000; under way; Andrew Peterson and Steven Johnson, builders. For Independent School District, brick school house, 65 by 90 feet, shingle roof, steam heat; cost \$15,000; just started; Jenkinson Bros. and D. M. Killian builders. For F. F. Beck, two-story brick store, 25 by 70 feet, tin roof, stone trimmings; cost \$3,000; under way; F. F. Beck and Jenkinson Bros., builders. For W. P. Manly, frame dwelling, 33 by 40 feet, furnace heat; cost \$2,800; projected. For Mrs. Marion, frame dwelling, 32 by 40 feet; cost \$2,300; under way; C. K. Poor, builder.

Architect J. W. Martin has in hand a brick school building; cost, \$15,000; D. M. Killian, builder. For W. E. Higman, three-story brick and stone building; cost, \$26,000.

Springfield, Mo.—Architect S. B. Abbott, of North Springfield, reports: For Wm. Marshall, one and one-half story frame cottage, 24 by 40 feet, with wing 24 by 20 feet, tower; cost \$2,200; under way.

Architect W. E. Foley reports: For Mrs. M. G. Weaver, one-story frame, 48 by 60 feet; cost \$6,000; under way. For John M. Lisenby, two-story frame, 40 by 54

feet; cost \$4,500; under way; Everett, Smith & Anderson, builders. For L. W. Hubbell, alterations in two-story frame, 38 by 60 feet; cost \$4,000; under way; Jarrett & Hutton, builders. For W. G. Porter, Jr., alterations in two-story frame, 32 by 40 feet; cost \$2,000; under way; Jarrett & Hutton, builders. For Board of Trade, three-story brick building, 45 by 90 feet; cost \$12,000; contracts not let. Catholic church, 47 by 106 feet, brick, slate roof; cost \$20,000; under way; Thos. Conlon, builder.

Stafford, Kan.—Architect N. A. Collins reports: About forty frame buildings are being erected here, ranging in cost from \$500 to \$1,800.

St. Paul, Minn.—Architect C. A. Wallingford reports: For Allen Brown, frame residence; cost, \$4,000; projected. For Sarah Ward, brick veneered residence; cost, \$4,000; projected. For Clark-Bryant Syndicate, brick stores; cost, \$12,000; Wm. Hodgins, builder. For same, brick factory; cost, \$4,000; Taylor & Craig, builders. For C. A. Wallingford, frame residence; cost, \$5,000; J. Le Duc, builder. For Lovering & Backus, brick veneered store building; cost, \$20,000; Dowling & Ruse, builders. The following are among the most important building permits issued recently: M. J. Miller, two-story brick veneered store and dwelling; cost, \$5,000. Benson & Hackett, block of one-story brick stores; cost, \$5,000. T. B. Campbell, two-story frame dwelling; cost, \$6,000. Theodore Hamm, two-story brick veneered dwelling; cost, \$20,000. Bass & Gulenberg, dwelling; cost, \$5,000. Anton Koessler, store and dwelling; cost, \$8,950. Mrs. A. B. Murphy, alterations to brick dwelling; cost, \$5,000. S. Dearing, two-story brick veneered dwelling; cost, \$6,000. St. Paul Real Estate and Improvement Association, one-story addition to brick store, Sixth street, between Jackson and Roberts; cost, \$5,000. Penner & Becht, two-story frame dwelling, Wilkin, between Smith and Ramsey streets, \$7,000. Oakland Cemetery Association, one and one-half-story stone dwelling, Sycamore, between Gate and Courtland streets, cost, \$7,500. Minnesota Transfer Railroad Co., one-story brick engine house, Union, near University; cost, \$3,000. W. Thauwald, two-story brick double store and dwelling, \$6,000.

Superior City, Wis.—Architect E. S. Radcliff, of St. Paul, Minn., reports: For James Barden, two-story brick office building, 24 by 48 feet, brick; cost \$8,000; plans under way.

Temple, Tex.—Architects Cook & Manning, of Waco, Texas, have prepared plans for the Temple Hotel Co., for a three-story brick hotel building; cost, \$15,000; Ben. Lee, of Belton, Texas, general contractor; to be commenced at once.

Toledo, O.—Architect N. B. Bacon has prepared plans for J. B. Bell for a \$20,000 residence. Also prepared plans for the new Third Baptist Church building; cost, \$19,000.

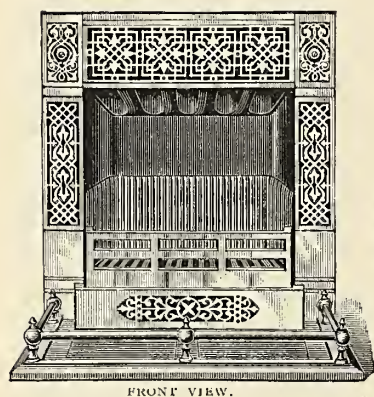
Van Wert, Ohio.—Architects Wing & Mahurin, of Fort Wayne, Ind., report: For G. W. McGovern: Two-story frame dwelling, 30 by 35 feet; cost \$2,500; under way.

West Plains, Mo.—Architect W. E. Foley, of Springfield, reports: Presbyterian church, brick building, 36 by 54 feet; cost \$3,500; projected.

Wyandotte, Mich.—Architects Hess & Raseman, of Detroit, report: For city of Wyandotte, one-story school building, 65 by 40 feet; brick, stone trimmings, slate roof; cost \$5,000.

Youngstown, Ohio.—Architect C. H. Owsley has prepared plans for a gymnasium building for this city.

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FRONT VIEW.

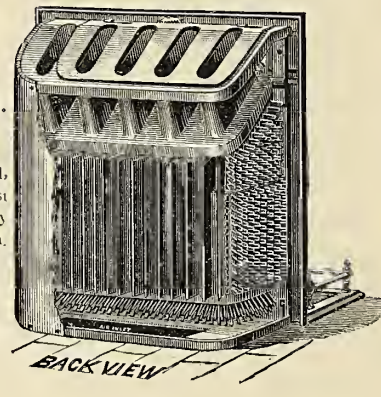
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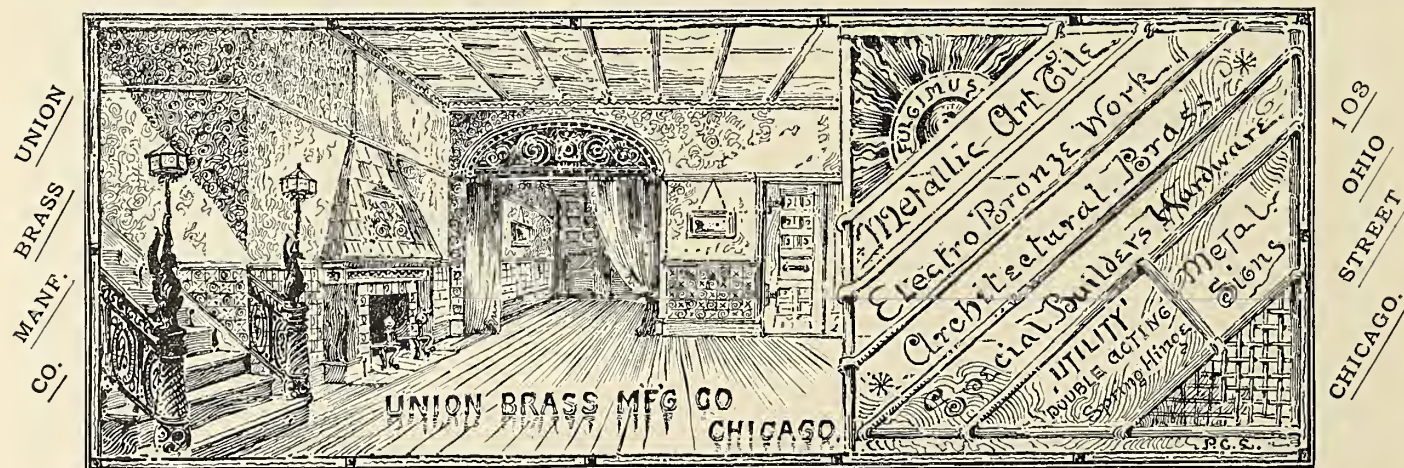
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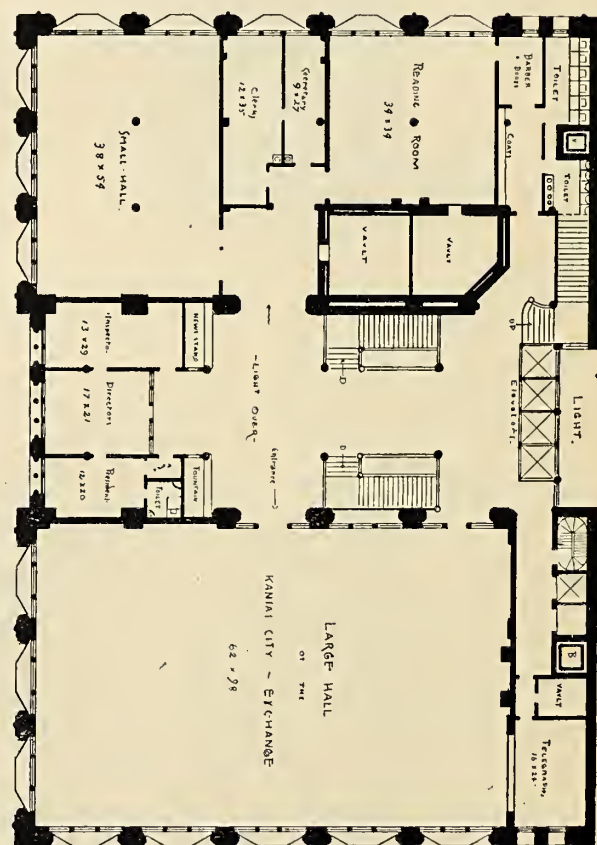
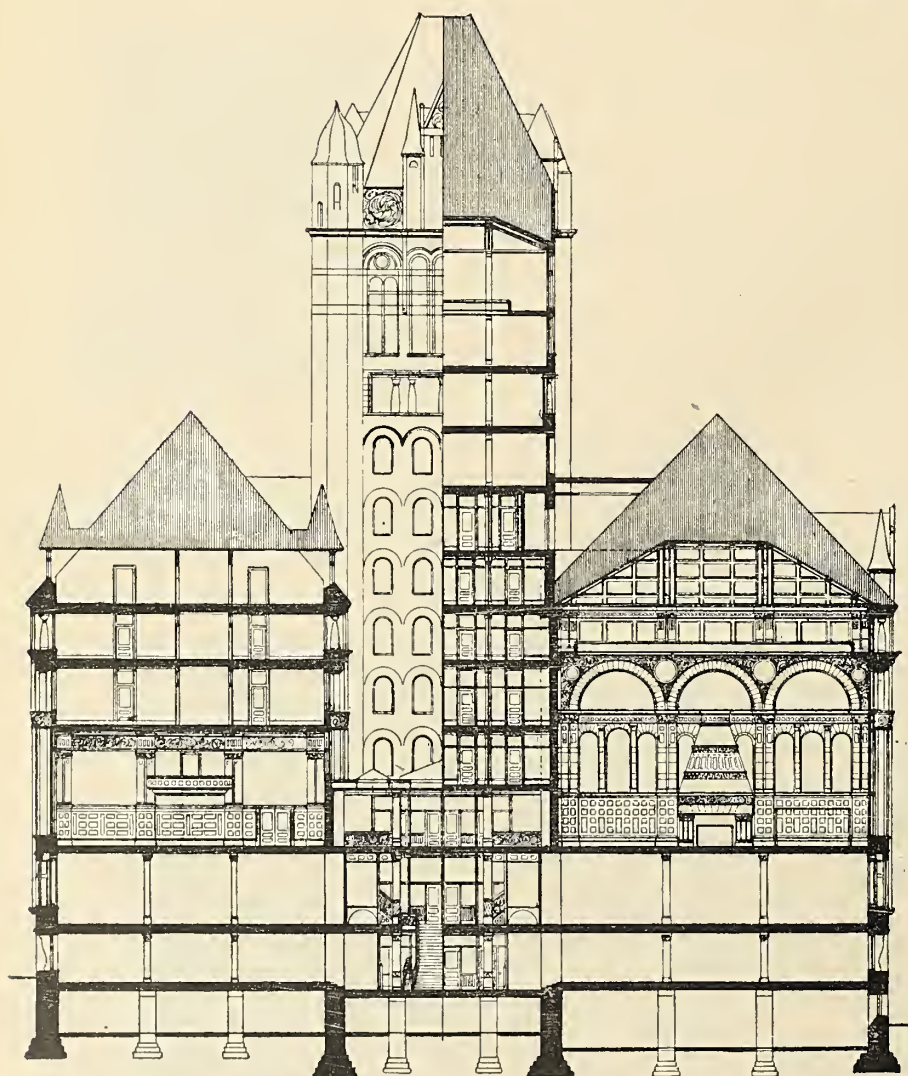
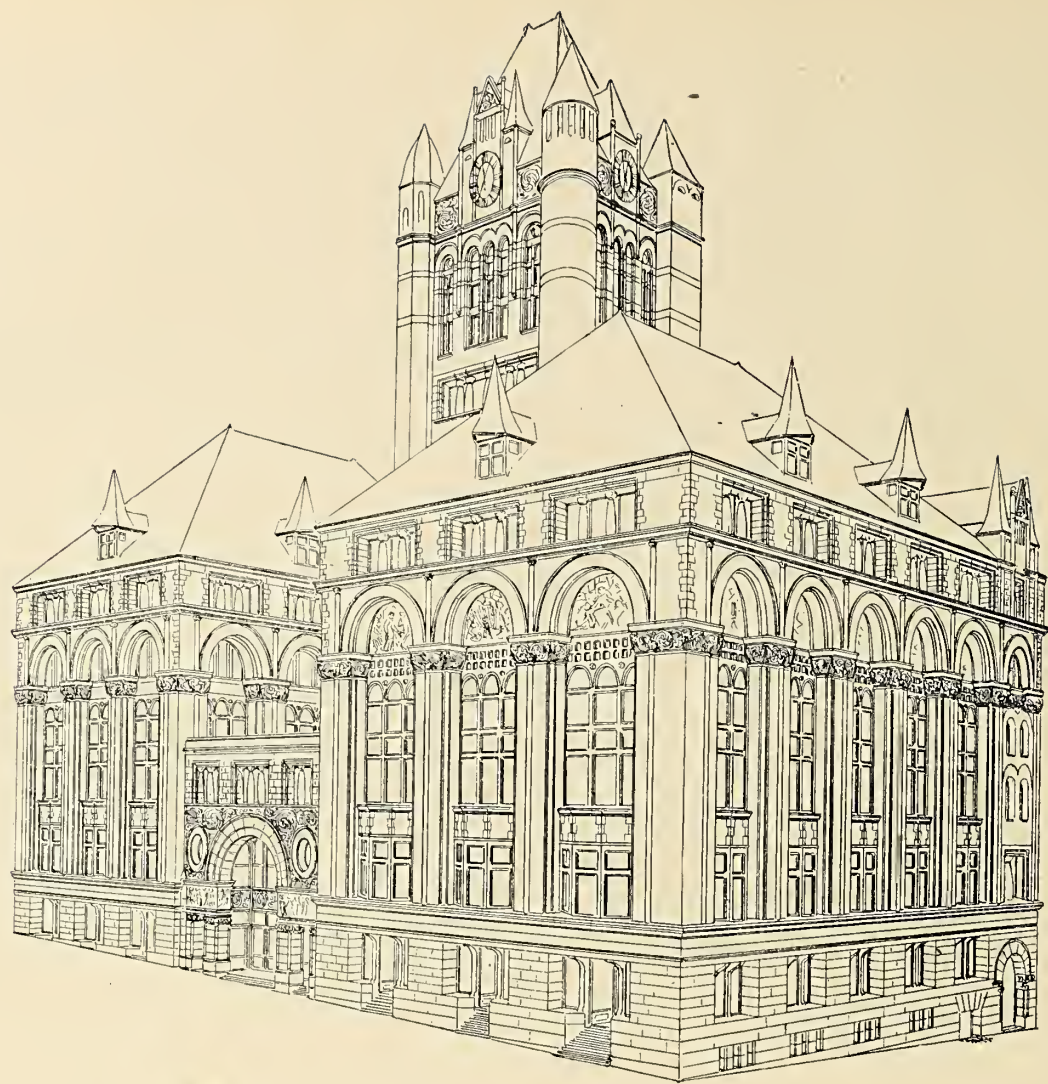


BACK VIEW.

THE HENRY DIBBLEE CO., Chicago Agents.

266 AND 268 WABASH AVENUE.



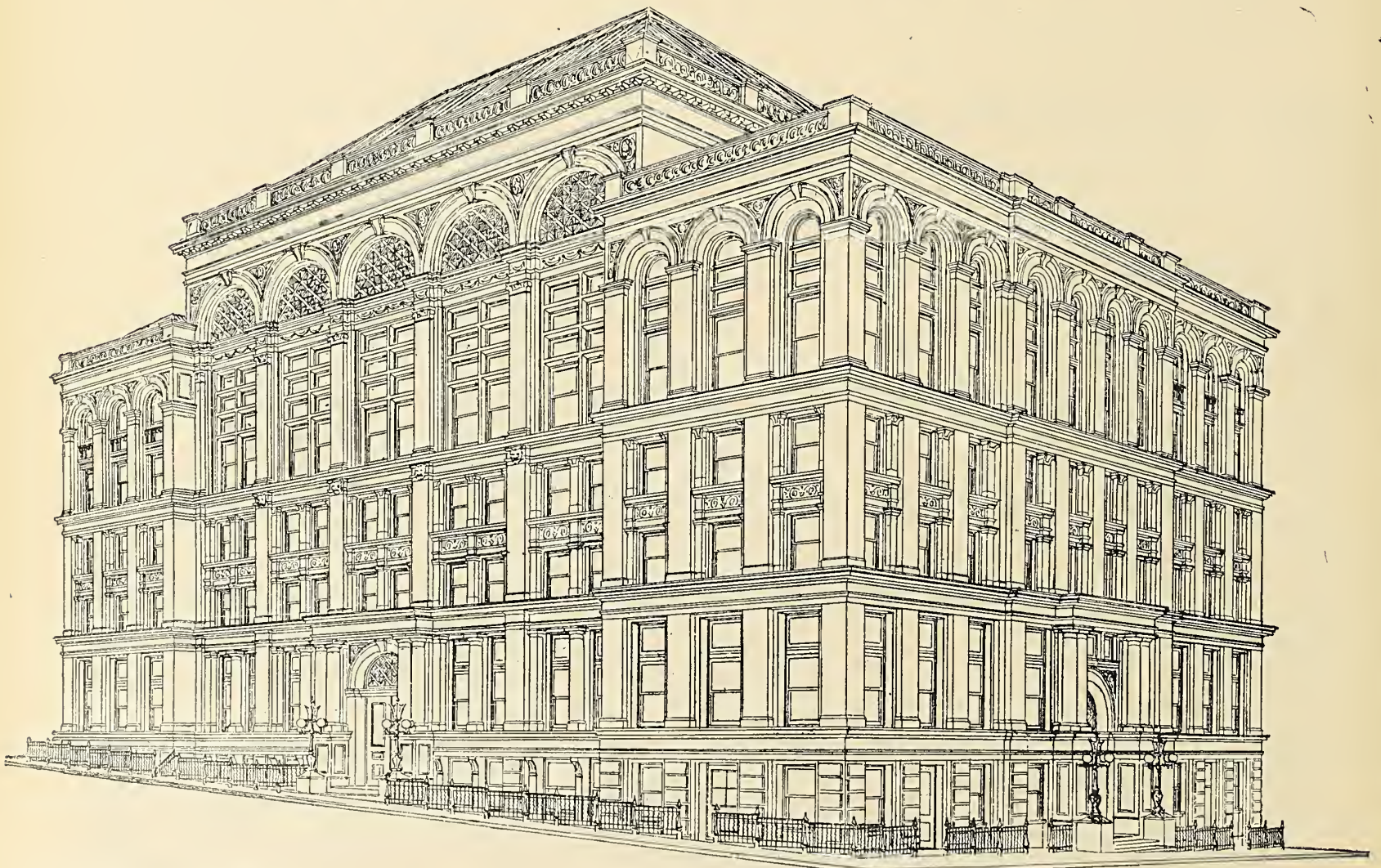


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COMPETITIVE DESIGN FOR KANSAS CITY EXCHANGE BUILDING.

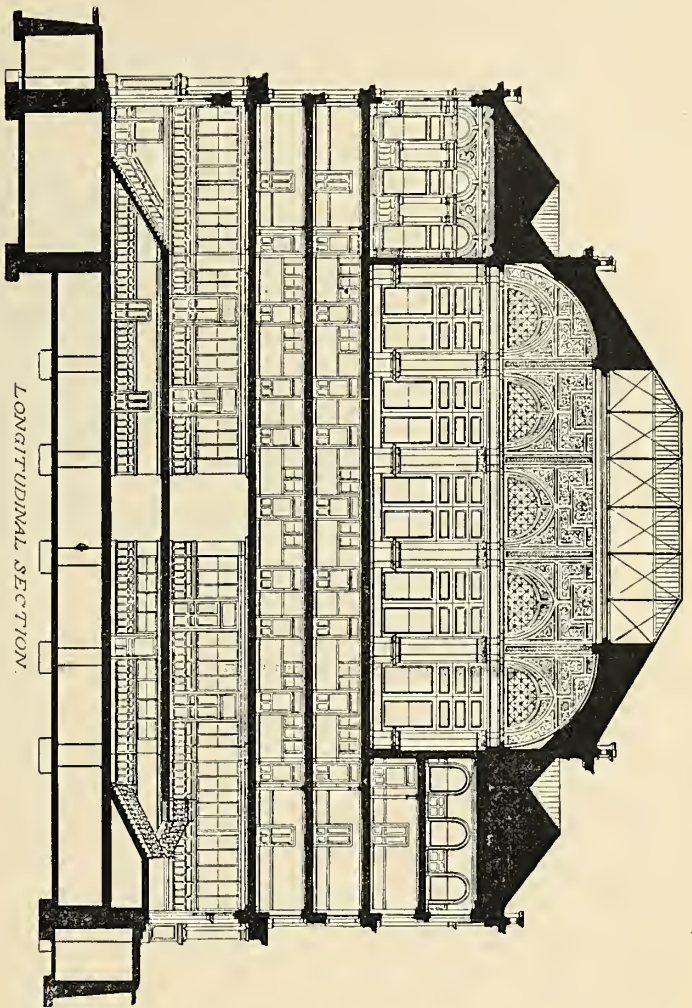
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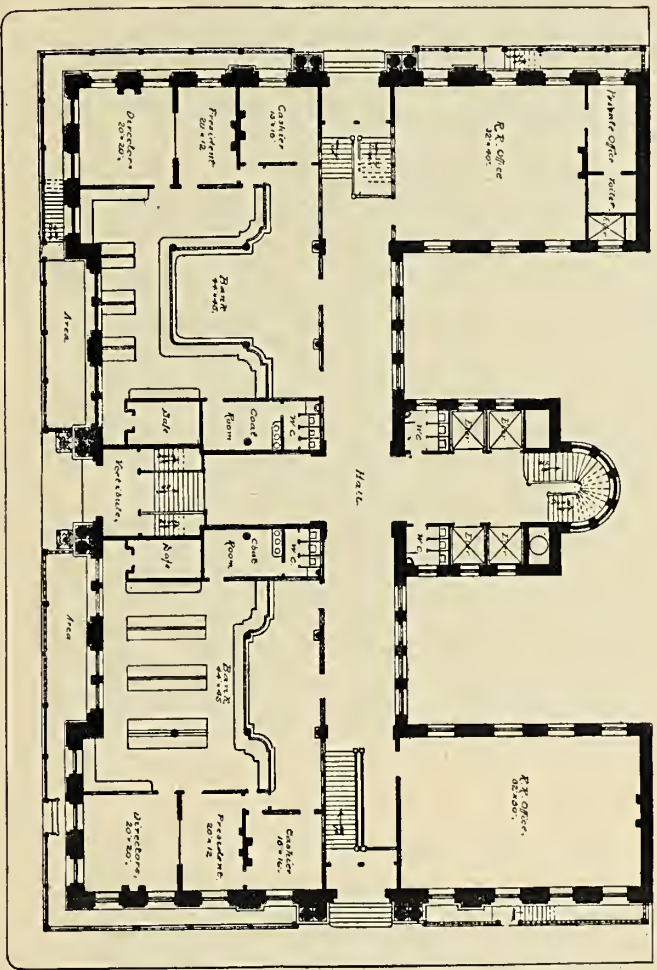
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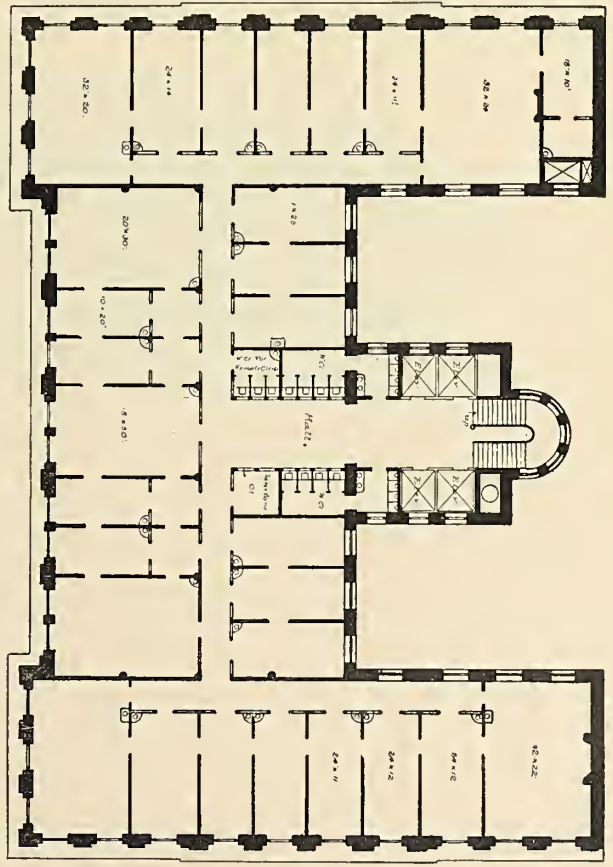
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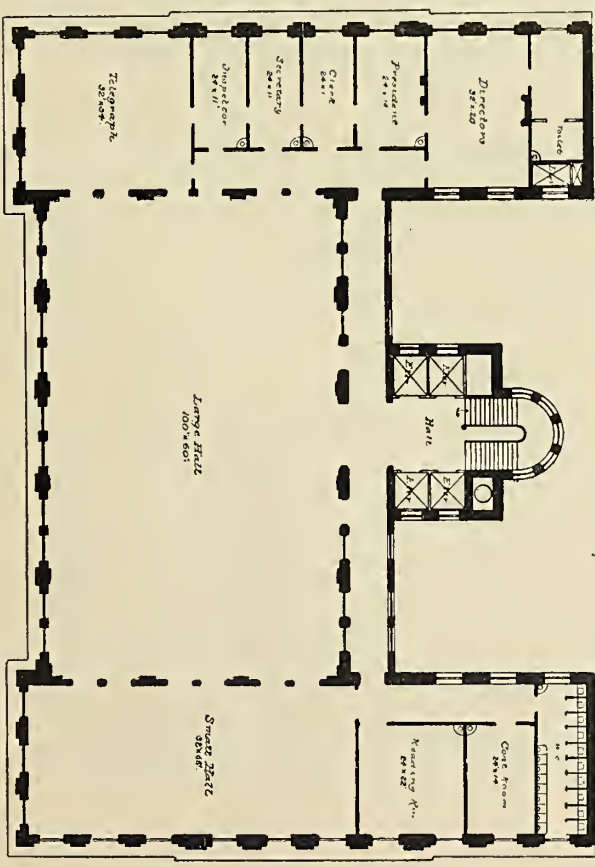
LONGITUDINAL SECTION.



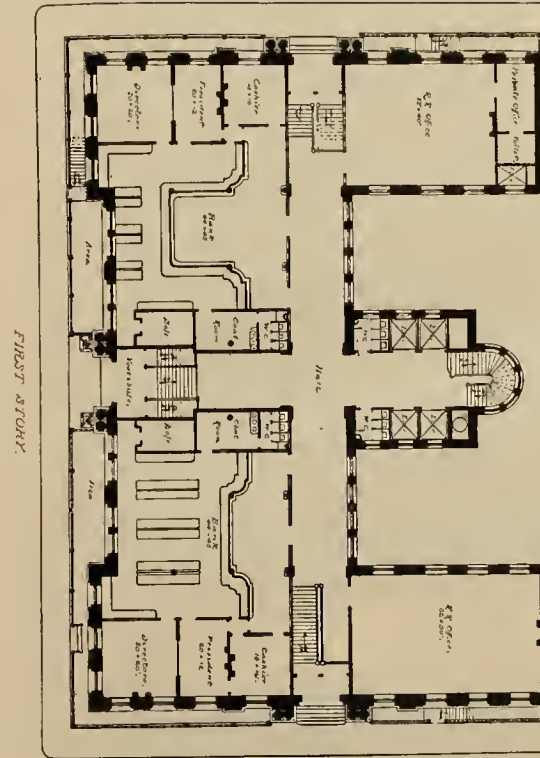
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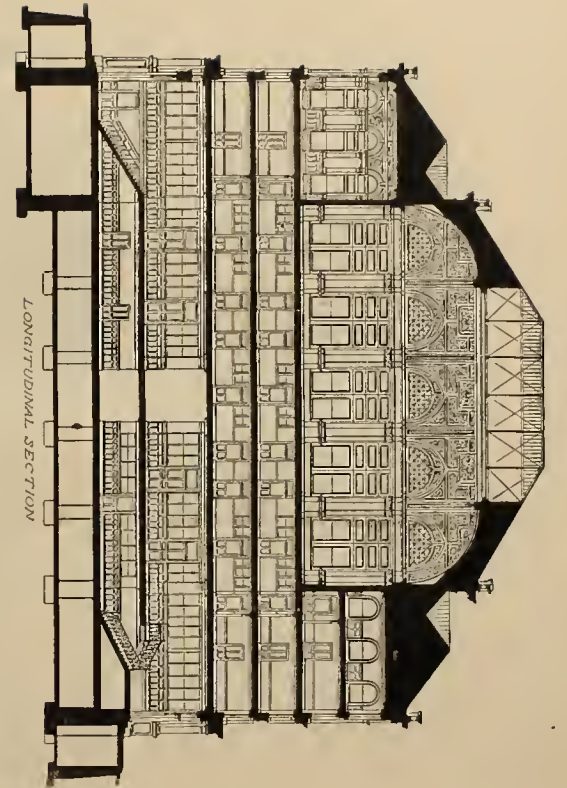
SECOND & THIRD STORIES.
OFFICES.



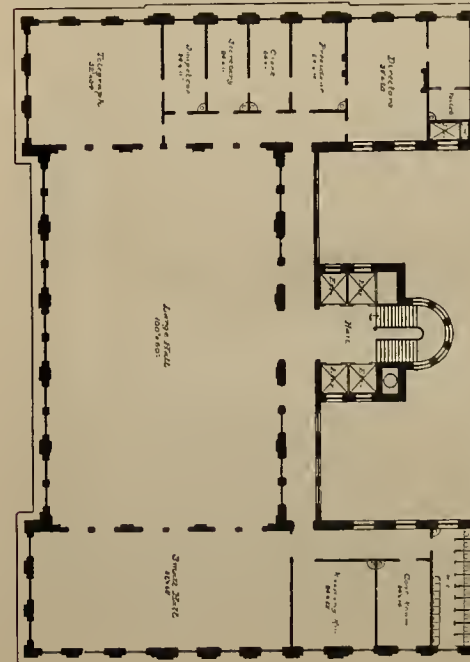
FOURTH STORY.



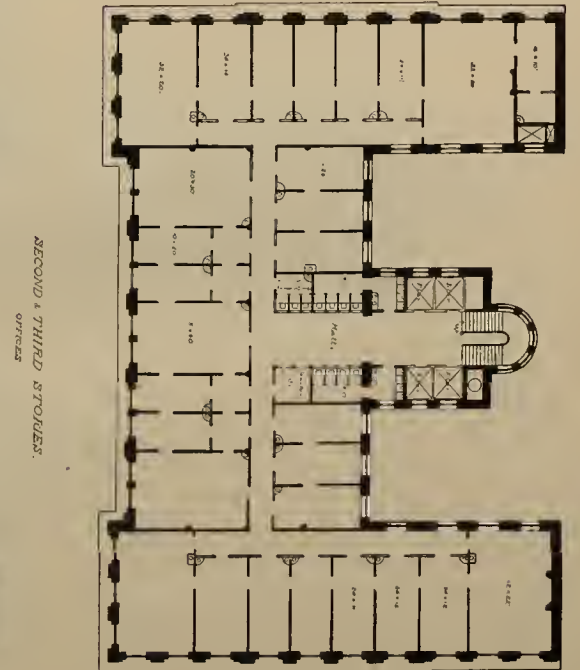
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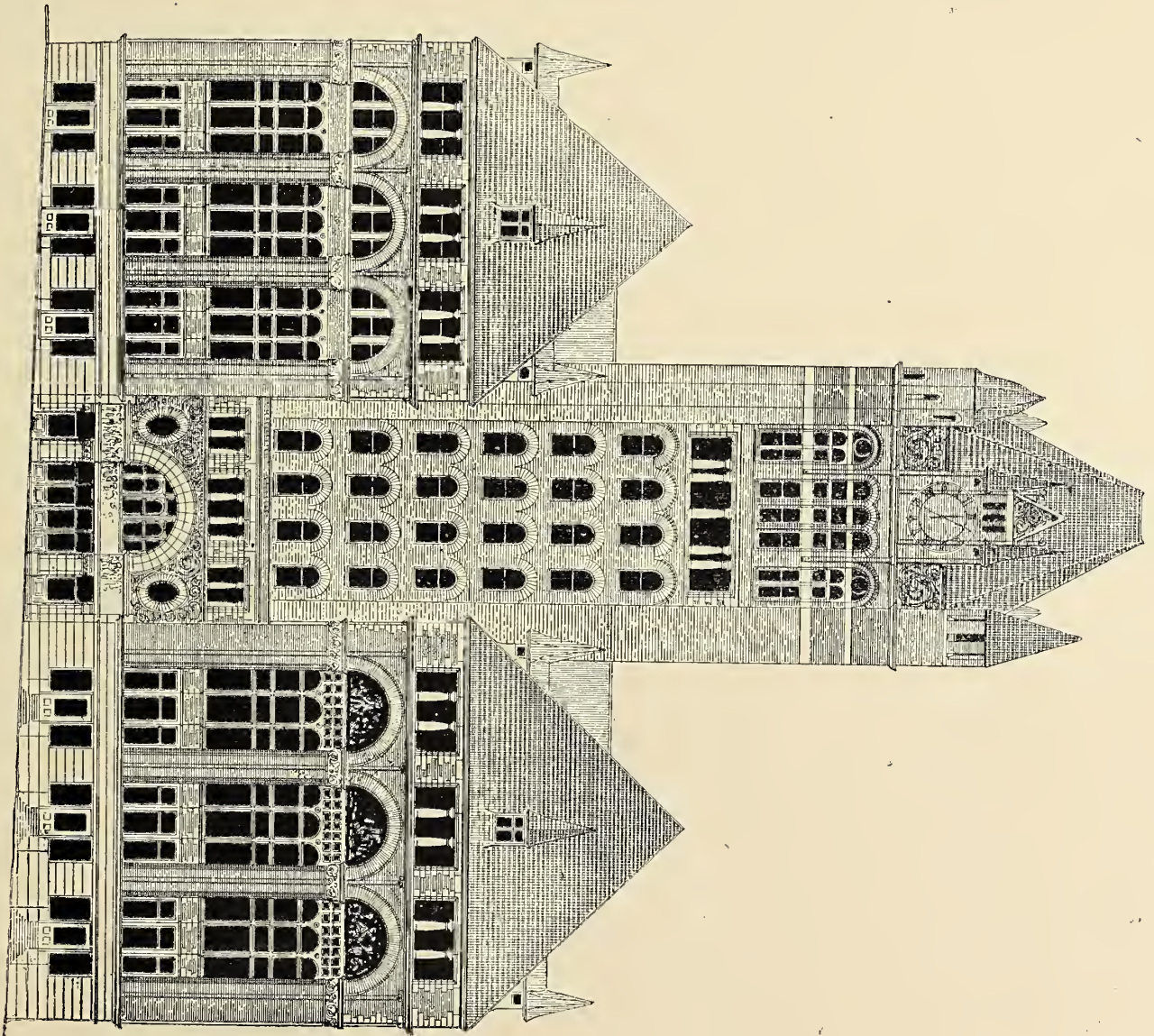
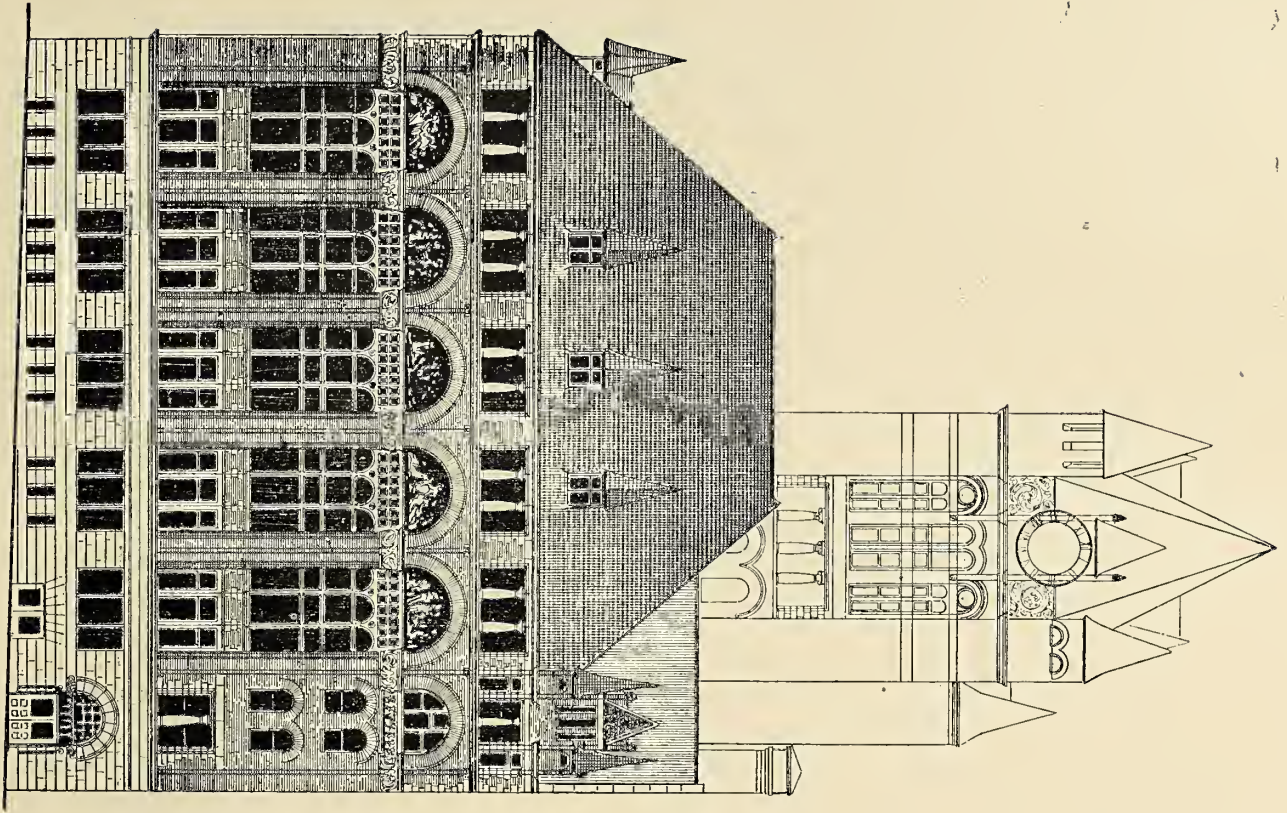
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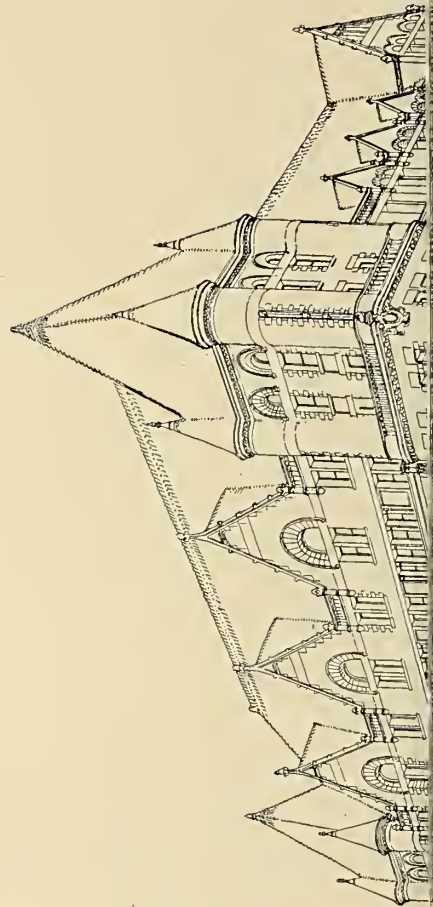
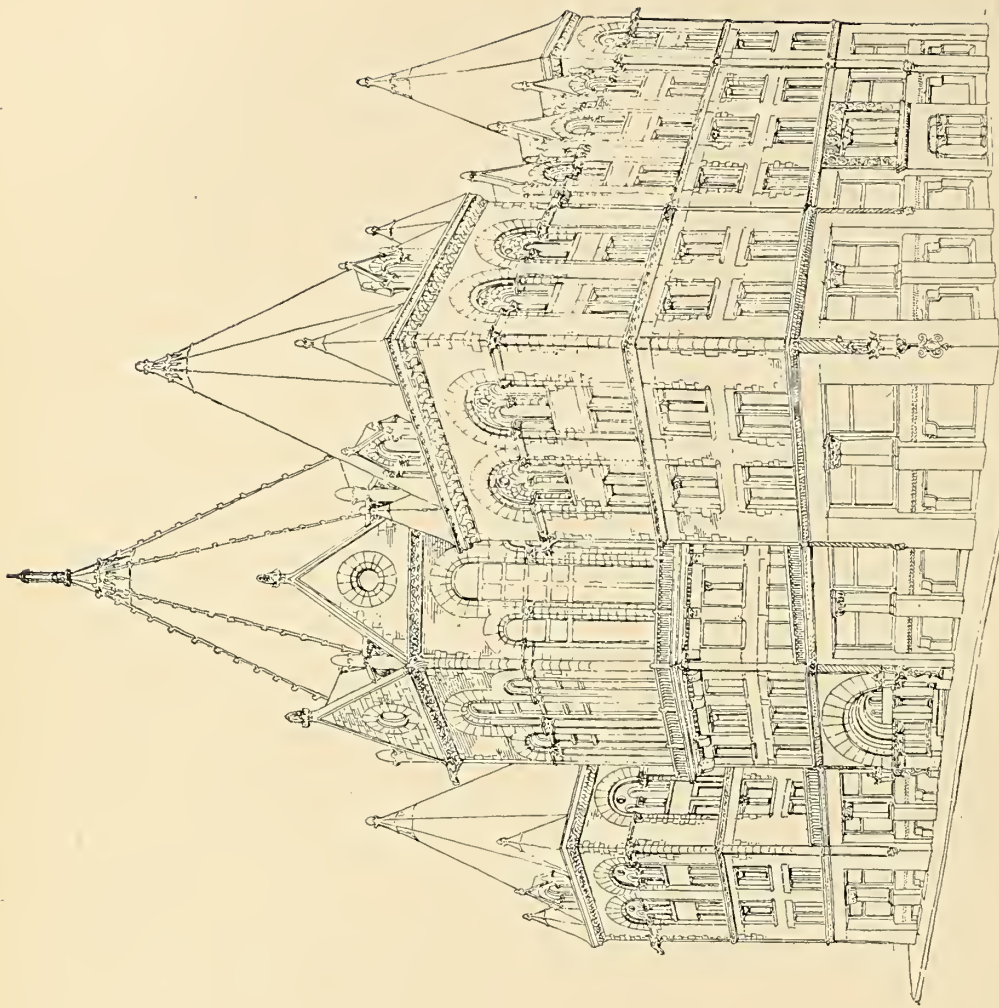
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SECOND & THIRD STORIES.

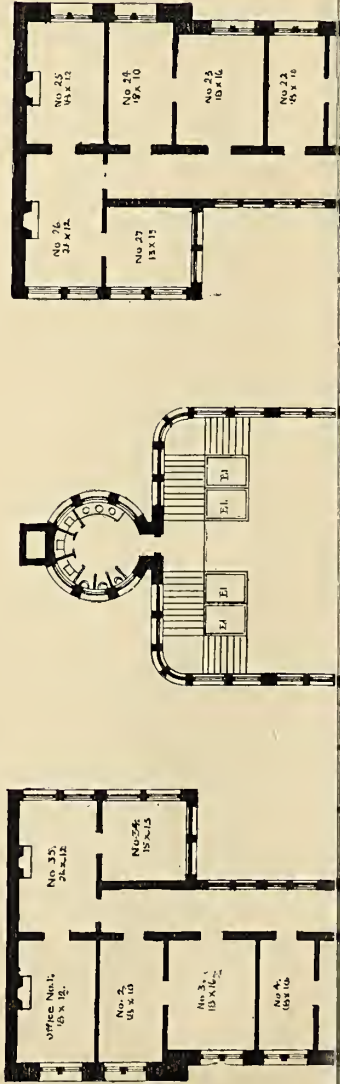


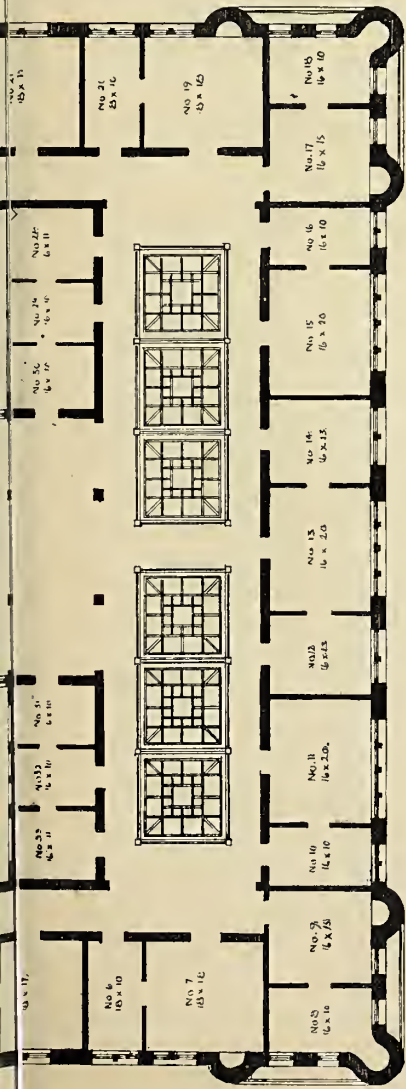




Fourth and Fifth Story Plans

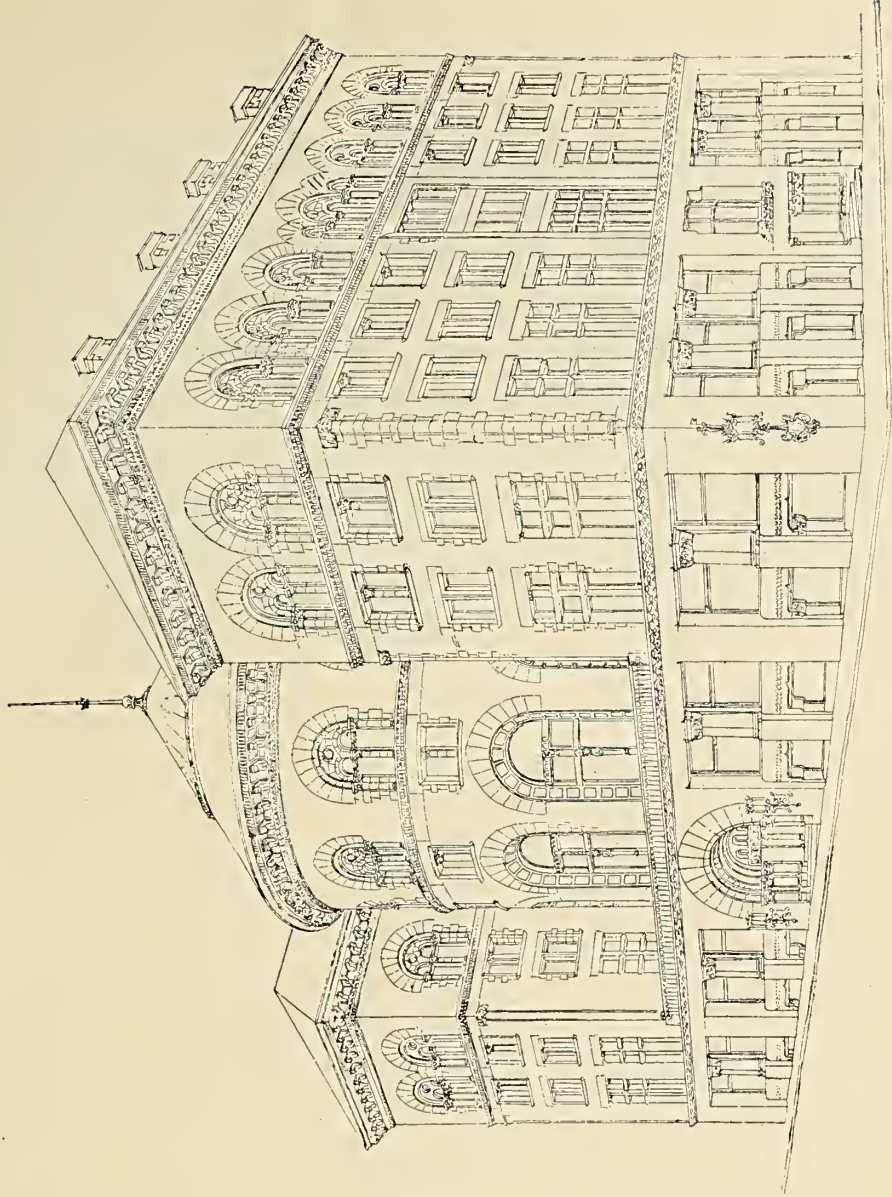
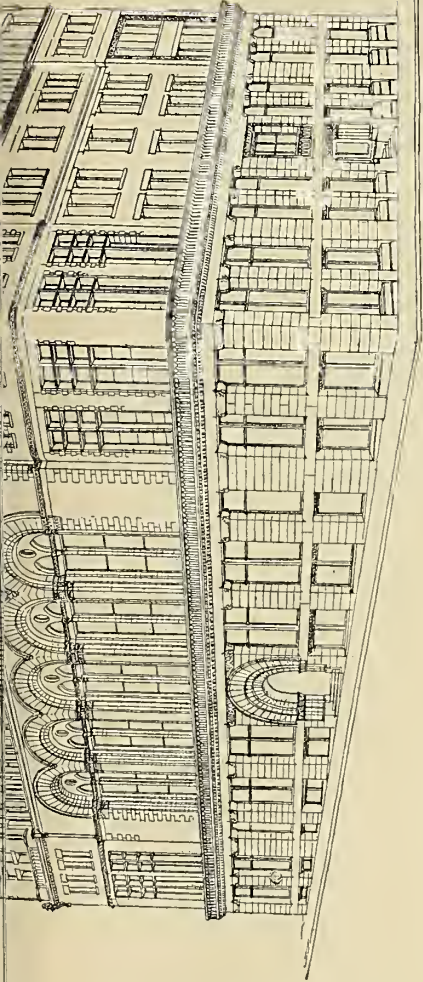
PLAN AND PERSPECTIVE OF "CLOVER LEAF" DESIGN.



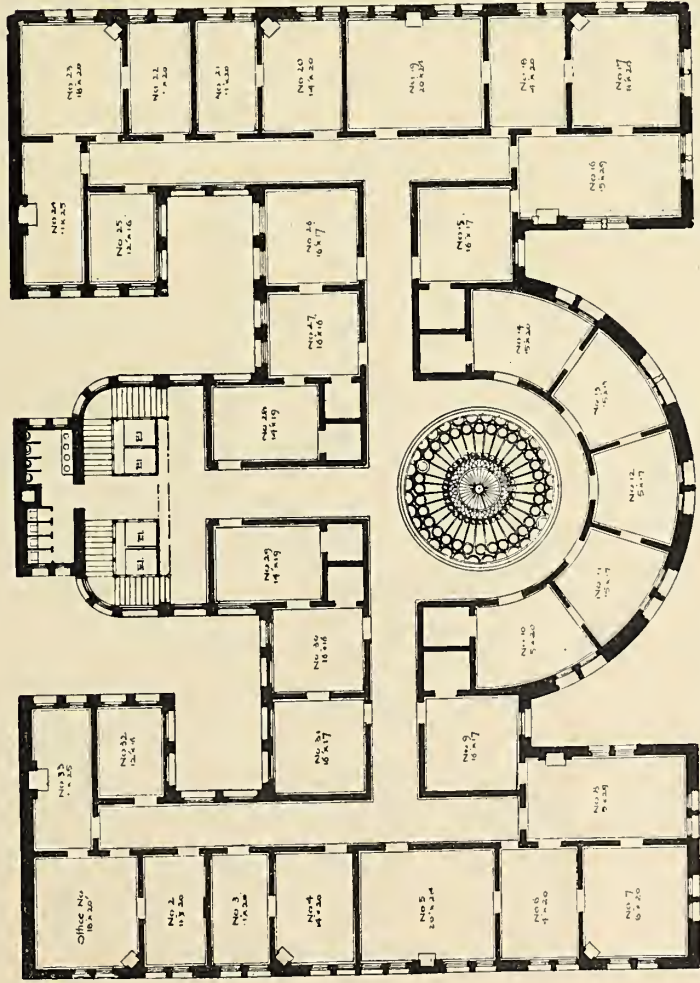


Fourth and Fifth Story Plans.

PLAN AND PERSPECTIVE OF "CRESCENT" DESIGN.



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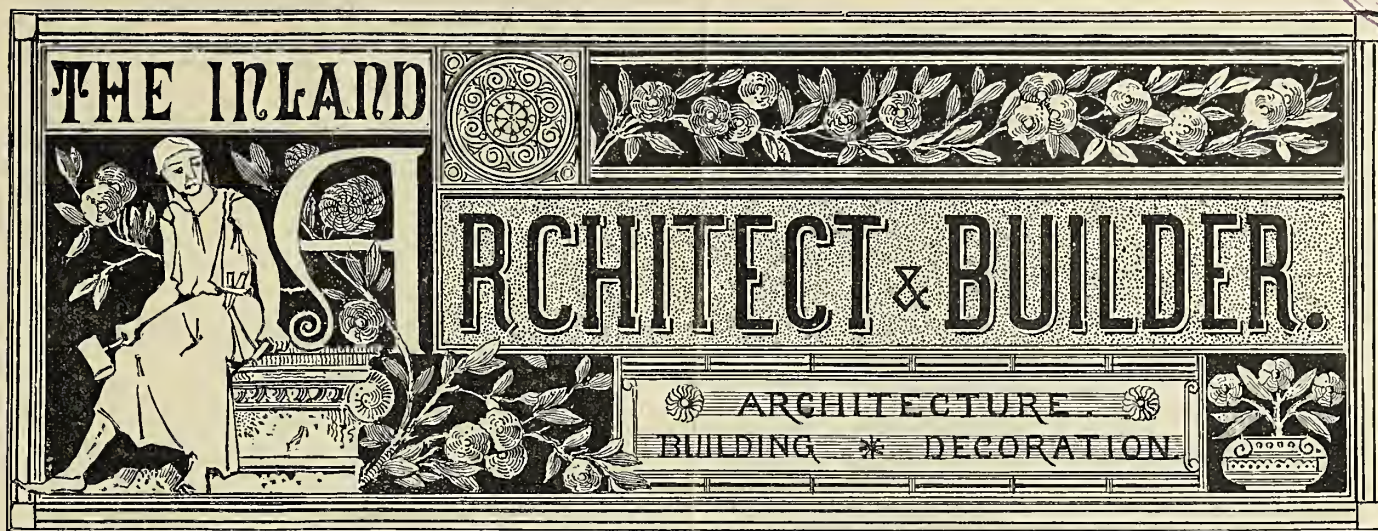


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PLAN AND PERSPECTIVE OF "PURITAN" DESIGN.

THREE COMPETITIVE DESIGNS FOR KANSAS CITY EXCHANGE BUILDING.

SUBMITTED BY "CLOVER LEAF," "CRESCENT" AND "PURITAN." PEABODY & STEARNS, ARCHITECTS, BOSTON, MASS.



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A MONTHLY JOURNAL
(WITH AN INTERMEDIATE NEWS NUMBER)
DEVOTED TO WESTERN INTERESTS.

OFFICIAL ORGAN OF THE
WESTERN ASSOCIATION OF ARCHITECTS.
(A NATIONAL ORGANIZATION.)

VOL. VIII.—No. 4.

CHICAGO, SEPTEMBER, 1886.

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INTERMEDIATE NEWS NUMBER,

DEVOTED TO

ASSOCIATION AND BUILDING NEWS.

PUBLISHED BY

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CHICAGO, ILL.

ALL members of the Illinois State Association of Architects should make it a special point to be present at its next meeting, October 7. The sanitary law reported upon at the last meeting will then be discussed and adopted. It calls for the active support and indorsement of every architect in the state and each should have a voice in its final disposal. It is the most important measure yet formulated by the Illinois Association.

BENEZETTE WILLIAMS, the well-known civil engineer, has been appointed consulting engineer of the City Drainage and Water Supply Commission to assist Chief Engineer Hering. It seemed for some time as though the place so long filled by De Witt C. Cregier could not be filled when that gentleman retired, but the experience and undoubted ability of Mr. Williams and his associate will place this important office once more in safe hands, and the city is to be congratulated upon securing such trustworthy and efficient officers as these gentlemen are known to be.

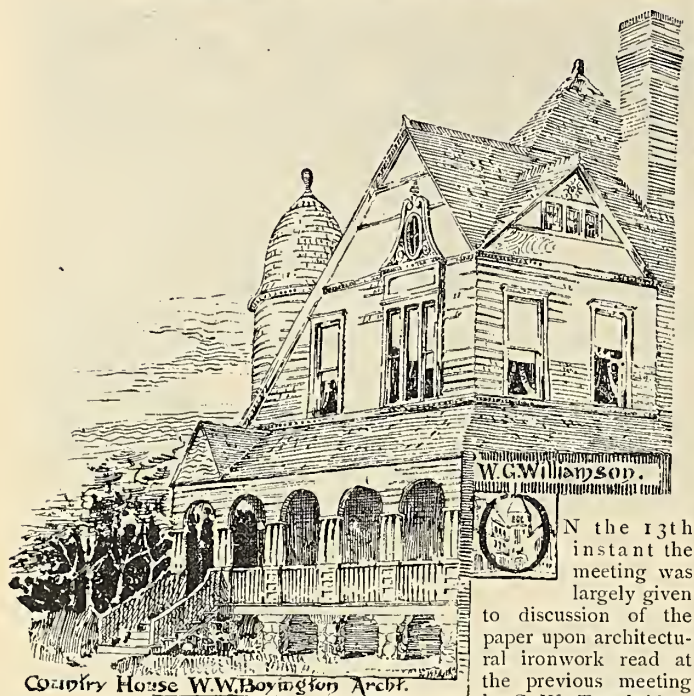
A DISAGREEMENT between the stone contractors and stonecutters of Chicago on one hand and the brick-masons, stonemasons and stonesetters on the other, has been in progress for the past two weeks and has assumed proportions that threaten a general stoppage to all new work for the season. The difficulty seems to be that the latter trades are all embodied in the bricklayers' union, which denies the right of stonecutters to cut the different forms of rock-faced work

used in building and refuse to back up any stone of this description that has been cut by stonecutters or others outside of the bricklayers' union. The stone contractors have sided with the stonecutters and have formed an association for the purpose of giving them the best possible support in the settlement of the difficulty. The entire trouble is due to the unreasonable and arbitrary policy which too often characterizes the action of the bricklayers' union. Broken ashlar work and rock-faced work of other forms is becoming a favorite and most pleasing material in residence fronts, and this interference will tend to discourage architects from designing in this style, if it does not entirely put a stop to the possibility of its continuance.

THE bricklayers of Chicago are as expert as any in the country, but the stonemasons are largely made up of men who could not learn to lay brick. They have little better idea of proper work than is involved in the mixing of mortar and shoveling it, knowing nothing of the more expert work of cutting stone into the geometrical shapes that is usually required in rock-facing. As a matter of course, the bricklayers' union have no more right to interfere with this technique of the architect's work, than they have to insist upon all architects furnishing blue prints. But in their indiscriminate demands they have little consideration for anything or anybody as is shown by their raising the cost of brick-work from thirty to forty per cent above that of last year, with no increase in the general volume of business to warrant it; the result of which will be either the refusal of the capitalist to build next year, or his paying the extra cost and going into bankruptcy. We are inclined to look hopefully upon the situation, however. The different trades may come to an amicable settlement, and, even if they do not, a general cessation of building until spring would more largely work injury to those who precipitated it, and after a winter of idleness, the spring would find them in a better condition to listen to common sense than they are at present. The stone contractors, as far as we can see, are asking for nothing, but are strong in their position that stonecutting belongs to stonecutters, and, from the architects' and owners' standpoint, should, because of the superiority of their work.

Association Notes.

CHICAGO ARCHITECTURAL SKETCH CLUB.



On the 13th instant the meeting was largely given to discussion of the paper upon architectural ironwork read at the previous meeting by C. W. Trowbridge,

and which is being widely read and commented upon.

The following report upon recent competitions was received from Architects L. H. Sullivan, W. L. B. Jenney and John W. Root, the adjudicating committee for the club:

CHICAGO, September 13, 1886.

Secretary Chicago Architectural Sketch Club:

The committee requested by you to decide upon the merits of drawings submitted for library, country shop front, village chapel and drinking fountain, desire to report as their verdict the following selection:

Library.—First, "Incomplete" (W. G. Williamson); second, "Italie" (M. G. Holmes).

Drinking Fountain.—First, O. C. Christian; second "Aqua Pura." (R. Wood). Country Shop Front.—First, "Simple" (W. G. Williamson); second, "U. S. A." (R. Wood).

Village Church.—First, "Rising Sun" (Harry Lawrie); second, "Koko" (A. junior, name not given).

Your committee is of the opinion that drawings submitted in this last competition are by no means up to the level which has been attained by the Sketch Club. One of their number declined to vote upon the drawings presented, the above reason being given.

We trust that the next competition will show a return to your better endeavors.

Very truly yours,

JOHN W. ROOT,
For the Committee.

[This criticism of the adjudicating committee is not undeserved, as the competitions of the club, in many instances of late, have not been participated in by the majority of its best members. The junior prizes have, so far, been largely taken by one member because of the absence of other junior competitors. The club, we think, has needed and deserved this timely hint, and will not only take it in good part but will, with the next competition, show the adjudicating committee that their deficiencies have been largely owing to the exceedingly busy season, which has prevented much club work which would have otherwise been accomplished.—ED.]

At the next meeting, 27th instant, M. G. Holmes will read a paper upon the History of Architecture in the Middle Ages.

NATIONAL BRICKMAKERS' ASSOCIATION.

The representative brick manufacturers of the United States have just completed the formation of a national association. The convention took place at Cincinnati and occupied two days. Papers were read by prominent manufacturers of brick, and, for the first time in this country, the subject of brickmaking was fully discussed. The membership is composed of about seventy-five of the leading firms in the United States. The officers for the ensuing year are: President, W. A. Eudaly, of Cincinnati; Vice-President, J. A. Blaffner, of New Orleans; Treasurer, A. J. Weckler, of Chicago; Recording Secretary, W. D. Gates, of Terra Cotta, Illinois, and Corresponding Secretary, T. A. Randall, of Indianapolis. The place of next annual meeting was not appointed, though a strong effort will be made to bring it to Chicago, and the only exhibition of brickmaking machines of the year will be made at that convention.

ASSOCIATION OF MASTER STONECUTTERS.

The stone contractors met at the rooms of the Builders' and Traders' Exchange on the 21st inst. and perfected an organization. The officers elected are: F. V. Gindele, president; W. Boldenweck, secretary, and T. C. Diener, treasurer, and as an executive committee, F. V. Gindele, N. McFarland, W. Boldenweck, T. C. Diener, John Tait, Henry Furst and John Tomlinson.

The principal business was the reading and adoption of a constitution and by-laws. The initiation fee was placed at \$50 and annual dues \$10, both being paid in advance by about thirty-five stone-contractors who joined.

The executive committee were appointed as a committee to meet committees of the bricklayers' and stonemasons' union, and of the Master Masons Association, at the Builders' and Traders' Exchange rooms, on the 25th inst., to discuss the matter now in controversy and come to an amicable settlement if possible.

A motion was made and carried directing the secretary to ask the stonecutters' union to instruct its members not to work for any contractor not a member of the Contractors' Association.

The meeting adjourned to meet the last Friday in the month.

Mosaics.

LONSDALE GREEN, of College Hill, Ohio, has formed a copartnership with W. R. Forbush, of Cincinnati, of the former firm of Smith & Forbush.

HEALY & MILLET, Chicago, are looking for a draftsman for general mantel and interior designing, who has a special knowledge of all kinds of finishing woods.

BIDS are now being received for the construction of the new parliament buildings at Toronto, Ontario, to cost \$2,000,000. R. A. Waite, of Buffalo, is the architect.

THE Smith & Egge Company are making an admirably balanced steel pinioned pulley and special steel chain, which has just been adopted for use in the Marshall Field warehouse.

MESSRS. LORD & THOMAS, of Chicago, the well-known advertising agents, have moved into new quarters which are spacious, elegant, original and novel in their appointments. The building, Nos. 45, 47 and 49 Randolph street, between State street and Wabash avenue, is at once the most striking in appearance in Chicago; built of sandstone, it is 70 by 174 feet, practically fireproof, and lighted on four sides. Three large elevators and two spacious stairways give abundant facilities for passengers and freight. Messrs. Lord & Thomas occupy the entire third floor, giving them a superficial area of nearly 12,000 square feet. This beautifully lighted room is unbroken by partitions, save a private office in one corner, thus bringing the entire working force of about sixty clerks into one spacious room. The various departments are so arranged that the work passes along with almost mechanical regularity.

ONE of the most interesting exhibits at the exposition at Chicago this year, and one full of interest to every householder is that made by the Chicago Refrigerator Manufacturing and Cold Storage Co. at the northeast end of the main building. An inspection of this new system of refrigeration and cold rooms will go far toward convincing the most skeptical that it is by far the most perfect system yet discovered, and one that in a very short time should take the place of all others. It is possible by this new system to keep meats, fruits, etc., almost any length of time in a perfect state of preservation. Already many prominent residents have introduced these cold rooms into their houses with the most gratifying results. Architects and persons building or contemplating building will find it to their advantage to examine the new system of the Chicago Refrigerator Manufacturing and Cold Storage Co., C. H. Rowe, president; J. H. Fairchild, secretary.

ONE of the latest inventions and of the most practical utility is that of the Jackson patent ash trap, manufactured by Edwin A. Jackson & Bro., 77 Beekman street, New York. Its purpose is to prevent the cloud of dust and ashes which always arises and deposits itself on all surrounding objects whenever the fire is raked. It fits closely into the ash pit and is adjustable, so as to be completely airtight, thus preventing the draft which, without its use, is always generated, and distributes the dust and ashes throughout the room. The traps work effectively and quickly, and are constructed to fit the Jackson ventilating grates and can be placed in any of them in a few moments, requiring no mechanical skill. They can also be used in any ordinary grate, but in such case a border is supplied for holding the trap securely over the ash pit. The manufacturers issue a circular which can be had on application, fully explaining and illustrating this very useful invention.

Synopsis and Building News.

Abilene, Kan.—Architect Geo. W. Shaffer, of Emporia, reports: For T. M. Malott, frame residence, 38 by 49 feet; cost \$4,500; drawings under way.

Allegheny, Pa.—Architect John M. Alston reports: The effect of the strikes has, as predicted in May, effectually stopped building. Very little has been done this season. Outlook for 1887 is good. At present am engaged upon a three-story brick building, 22 by 100 feet, for Fred Smith; cost \$8,000; taking figures. Also taking figures on two three-story frame houses, 30 by 35 feet, for Mrs. K. V. Clooe; cost \$3,000.

Aurora, Ill.—Architect Fred. W. Wolf, of Chicago, reports: For J. P. Dostal, brewery; cost \$30,000; under way.

Baldwin, Mich.—Architect Sidney J. Osgood, of Grand Rapids, reports: Work on court house is progressing; roof is now on; cost of building, \$12,000.

Beloit, Kan.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: For A. H. Ellis, frame dwelling; cost \$2,000.

Bozeman, Mont.—Architect Byron Vreeland, reports: Present condition and outlook steady; fair amount of fall work, general office work, and projected work for next spring. For S. Ruffner, two-story brick residence, 32 by 68 feet, hardwood finish; cost \$10,000; all day work. For Livingston school, two-story brick, 64 by 74 feet; cost \$18,000; completed; M. V. Boughton, builder. For F. W. Vreeland, one-story brick cottage, 28 by 44 feet; cost \$2,500; Koch & Vreeland, builders.

Architects F. G. Draper & Co., of St. Paul, Minn., report: For Nelson Story, three-story residence, 50 by 90 feet, ornamental pressed brick, Kasota stone trimmings, metal Mansard roof, copper cornices, finials, etc., entrance, bay windows and dormers of Sioux Falls granite, hardwood finish, steam heating; cost \$104,000; Wm. Babcock, carpenter; Permode & Davis, masons.

Cadillac, Mich.—Architect Sidney J. Osgood, of Grand Rapids, reports: Two ward school houses; cost \$6,000; J. G. Morris, contractor. Also frame dwelling for W. W. Cummer; cost \$1,200.

Centralia, Ill.—Architects Bullard & Bullard, of Springfield, report: For A. M. Brown, two-story frame dwelling, 35 by 39 feet; cost \$2,500; under way; day work.

Chicago.—Unless the Chicago Council repeals its action condemning the Chicago Burlington & Quincy Railway tracks on West Twenty-second street, a great injustice will be done as well as a severe hindrance if not complete stoppage placed upon the growth of the lumber district. This district is already too much hampered by inadequate facilities for transportation and a vast improvement in this respect will soon have to take place or the lumber interest will have to move to South Chicago or somewhere else where every advantage for growth will be offered.

Architects J. M. Van Osdel & Co., report: For F. T. Haskell, "Sherwood" flats, 54 by 62 feet, on Prairie avenue, near Thirty-first street; cost \$20,000; under way; Fox & Hinds, masons; Steinmetz & Eilenberger, carpenters. For Ed. Grace, European Hotel building, 50 by 103 feet, six stories and basement, located on corner of Jackson and Clark streets; cost \$70,000; John Angus, mason; Steinmetz & Eilenberger, carpenters. For James B. Speed, five-story and basement European Hotel; 50 by 95 feet; cost \$45,000; Fox & Hinds, masons. For Mrs. Redish, three-story and

cellar flat building, 50 by 75 feet, corner of Ashland avenue and York street; cost \$18,000; taking figures. For Thos. Eckhardt, store and flats, 25 by 100 feet; cost \$10,000; A. Carlson, builder. Contracts have been let for the Dale building, corner of Dearborn and Harrison streets. The Carter building is nearly finished, and the Memory building is under roof.

Architects Treat & Foltz report: For Fritz Foltz, three-story residence, 38 by 50 feet, at 219 Goethe street, Anderson pressed brick, brownstone trimmings; cost \$15,000; under way; Vic. Falkender, mason; P. J. Hurter, carpenter.

Architect Fred. W. Wolf, reports: For Ernst Tosetti & Co., five-story brewery on Bissel, near Fortieth street; cost \$100,000; under way; C. G. Trieglaff & Co., masons; Peter Kauff, carpenter. For West Side Brewing Co., brick building, 54 by 108 feet, on North Paulina street; cost \$80,000; under way; Wm. Meyne, mason; W. Runde, carpenter. For Wacker & Birk Brewing Co., preparing plans for brick building, to be built at 171 North Desplaines street; cost \$20,000. For Brewer & Hoffman Brewing Co., brick brewery, to be erected on South Green street; cost \$40,000.

Architects Cobb & Frost report: For Victoria C. Thompson, two-story dwelling, 38 by 70 feet, corner of Delaware Place and Dearborn avenue, stone front; cost \$15,000; under way; John Angus, mason.

Architects Flanders & Zimmerman report: For Borner & O'Brien, two two-story dwellings, 42 by 68 feet, at 21-23 Bellevue Place, red and brown brick, brownstone trimmings; cost \$15,000; E. Earnshaw, mason.

Architect W. A. Furber reports: For J. B. Hobbs, six-story store building, 48 by 75 feet, at 163 to 165 Market street, St. Louis, pressed brick, brownstone trimmings; cost \$32,000; John Griffith, contractor.

Architects Cleveland & Chapman report: For J. B. Clow, block of eight stores with flats above, 147 by 50 feet, on Wabash avenue, near Fourteenth street, pressed brick with stone trimmings; cost \$40,000.

Architect H. M. Hansen, reports: For H. Michaelson, three-story stores and flats, 50 by 46 feet, at 114 and 116 N. Center avenue, St. Louis pressed brick; cost \$12,000; under way; Steuben & Thompson, masons.

Architects Edbrooke & Burnham, report: For Andrew Pearson, two two-story stores and flats, 44 by 50 feet, at 308 and 310 West Eighteenth street, under way, Anderson pressed brick; C. Boynton, carpenter. For E. Shaw, two-story store and flats, on Fremont street, pressed brick and stone trimmings; cost \$6,000; under way; C. Boynton, carpenter.

Architect C. A. Weary, reports: For H. W. Martin, two four-story dwellings, 42 by 80 feet, at 77 and 79 Sangamon street, St. Louis pressed brick, buff Bedford stone trimmings; cost \$10,000; under way; A. Lanquist, mason; H. W. Martin, carpenter.

Architect Eric J. Ostling reports: For Wm. Kemper, two-story dwelling, 24 by 50 feet, at 472 Orchard street; cost \$5,500; St. Louis and Indiana pressed brick; under way; C. Lindstrom, mason; C. Wendt, carpenter.

Architect Theo. Karls reports: For Henry Wissel, three-story flat building, 25 by 65 feet, at 210 East Huron street; cost \$10,000; under way; G. Stoeffker, mason; Steinmetz & Eilenberger, carpenters.

Architect L. Martens reports: For J. A. Hamilton, two-story flat building, 44 by 60 feet, on Seeley avenue; cost \$10,000; H. Grosser, mason; G. Gutricht, carpenter.

Architect C. O. Hansen reports: For J. H. Ohlerking, store and flat building, 125 by 50 feet, at 205 to 213 West Adams street, Indiana pressed brick; cost \$20,000; under way; Tobiasson & Co., masons; James Dahm, carpenter. For Mrs. M. Hansen, three-story store and flats, 27 by 64 feet, at 431 West Ohio street, Indiana pressed brick; cost \$6,000; under way; E. W. Egeris, mason.

Architect T. W. Wing reports: For W. W. Willett, two two-story dwellings, 24 by 55 feet, at 221 to 223 Campbell avenue, Indiana pressed brick, terra-cotta trimmings; cost \$10,000; under way; H. Hughes, mason.

Architect H. B. Seeley reports: For L. W. Pierce, eight-story warehouse, 44 by 88 feet, at 240 to 242 Fifth avenue, Anderson pressed brick; cost \$70,000; A. Lanquist, mason; John A. Johnson, carpenter.

Architect J. L. Silsbee reports: For G. W. Hale, two-story dwelling, 36 by 60 feet, at 539 Dearborn avenue, Anderson pressed brick, terra-cotta trimmings; cost \$12,000; under way; John Mountain, mason.

Architect S. Linderoth reports: For Ernest Welge, two-story and attic and basement residence, 21 by 54 feet, on Fremont street, near Webster avenue, Anderson pressed brick, brownstone and terra-cotta trimmings, slate mansard; cost \$6,000; contract not let. For Mrs. L. Mueller, two-story and basement frame dwelling, 21 by 48 feet; cost \$2,500; contract not let.

Architect L. G. Hallberg reports: For Samuel Anderson, three-story dwelling, 25 by 63 feet, 694 North Park avenue, Anderson pressed brick, brownstone trimmings; cost \$10,000; under way; A. Almet, mason; M. Modin, carpenter.

Architect Julius Speyer reports: For A. Harper, three-story store and flats, at 1215 Van Buren street, St. Louis pressed brick, stone trimmings; cost \$6,000; John Pike, mason. For James Maher, three-story flats, 45 by 70 feet, on Langley avenue, Anderson pressed brick, Bedford stone trimmings; cost \$12,000. For James McMahon, three-story flats, 30 by 70 feet, Chestnut and Market streets, Indiana pressed brick, Lemont stone trimmings; cost \$8,000. For Gahan & Byrne, four-story building, 26 by 126 feet, corner of Forty-second and Halsted streets, St. Louis pressed brick; cost \$25,000; under way; McDermott & O'Brien, masons; F. H. Avers & Co., carpenters. For J. Backer, three-story hotel, 25 by 100 feet; cost \$12,000; projected; contracts not let. For John McEwan & Son, four-story flat building, 100 by 80 feet, on Archer avenue, near Twenty-second street; cost \$25,000.

Cincinnati, Ohio.—Architect A. Druiding, of Chicago, Ill., was successful in the competition for the St. Lawrence Church to be erected here. Plans are now ready for figures; building will cost \$70,000.

Delaware, Ohio.—Architect A. Druiding, of Chicago, Ill., reports: Contract let for foundation for St. Mary's Church; building will cost \$24,000; taking figures on other contracts.

Emporia, Kan.—Architect Geo. W. Shaffer reports: For David McCoy, three-story brick building, 60 by 80 feet; cost \$10,500; galvanized iron cornice, tin roof.

Farmington, Ill.—Architects Bullard & Bullard, of Springfield, report: For J. K. Knudson, two-story frame dwelling, 30 by 32 feet; cost \$1,800; under way; day-work.

Grand Rapids, Mich.—Architect Sidney J. Osgood reports: For Mrs. Esler, block of five tenements; cost \$15,000; H. E. Doren, contractor. For Christian Society, church building; cost \$5,000; Bennett, Osborn & Co., builders. For T. W. Strathan, business building; cost \$6,000; James Curtis, builder. Hotel building for West Michigan Park; cost \$10,000; Rowan Bros., builders. Fifth Holland Reformed Church; cost \$10,000; under way; daywork. For Mrs. Davis, repairs, etc.; cost \$2,000; Richens & Sterns, contractors. For Frank Moore, dwelling; cost \$2,500; Bennett, Osborn & Co., builders. For C. M. Linington, of Chicago, block of four stores; cost not estimated; contracts not let. Baptist Church; cost \$5,000; under way; daywork. For Mr. Bernes, business building; cost \$3,000; contract not let. The Middcomb building is under roof and ready for plastering; cost \$120,000. This has been a very busy season, and looks encouraging for balance of season.

Hastings, Mich.—Architect Sidney J. Osgood, of Grand Rapids, reports: For D. D. Ford, hotel, public hall and opera house; cost \$20,000; contracts not let.

Highland, Wis.—Architect A. Druiding reports: pastor's residence, to cost \$4,000.

Hutchinson, Kan.—Present condition and outlook fair.

Architect A. B. Howatt reports: For Bank of Commerce, two-story stone bank building, 25 by 100 feet, vaults, tin roof; estimated cost \$10,000; contract not let. For A. Miner, two-story frame building, 32 by 33 and 18 by 24 feet; stone basement; under way; W. C. Richardson, builder.

Hyde Park, Ill.—Architects Beman & Johnson, of Chicago, report: For Mr. Chapman, two-story double dwelling; cost \$8,000. For Mr. Buchanan, two-story frame dwelling; cost \$4,000. For C. G. Grut, two-story dwelling; cost \$4,000. For W. G. Denny, two-story dwelling; cost \$3,600. For C. E. Morrill, two-story dwelling; cost \$8,000.

Kalamazoo, Mich.—Architect Sidney J. Osgood, of Grand Rapids, reports: For Oscar Tuthill, dwelling, to cost \$3,000; contracts not let.

Lake City, Mich.—Architect Sidney J. Osgood, of Grand Rapids, reports: Jail and sheriff's residence; cost \$6,000; contract let to Geo. Nelson.

Manistee, Mich.—The Unitarian Church is ready for interior finish; cost \$14,000; Sidney J. Osgood, of Grand Rapids, architect.

Marion, Kan.—Architect Geo. W. Shaffer, of Emporia, reports: For Jos. M. Young, two-story stone store, office and hall building with mansard roof; cost \$10,000; taking figures.

Middleville, Mich.—Architect Sidney J. Osgood, of Grand Rapids, reports: For J. Carveth, frame dwelling; cost \$3,000; under way; daywork.

Miles City, Mont.—Architect Byron Vreeland reports: Present condition and outlook rather quiet. Buildings now under way will about finish the season. For W. F. Schmalls, three-story block, 25 by 80 feet, ornamental brick front; cutstone trimmings, tin roof; cost \$12,000; Bryan & Manchester, builders. For J. McGuire, one-story brick cottage, 22 by 34 feet; cost \$1,500; not let. For Schmalls & Ulman, two-story brick house, 18 by 38 feet, tin roof; cost \$3,000; not let. For P. Gallagher, two-story brick house, 25 by 35 feet; cost \$3,500; contract not let.

Minneapolis, Minn.—Among the building permits recently issued are the following: E. E. Titus, two-story frame dwelling and barn, 3135 Colfax avenue; cost \$4,400. J. R. Bustrand, two two-story frame dwellings, 214 and 216 Thirty-first west; cost \$4,000. H. T. Bush, two-story frame dwelling and barn, 1811, 1843 Vine Place; cost \$6,000. F. H. Peavey, two-story veneer dwelling, 2119 Park avenue south; cost \$17,000. S. P. Munson, three-story brick veneer store and residence, 1413 Washington avenue north; cost \$6,000. P. H. Jones, two-story dwelling, 527 North Pennsylvania avenue; cost \$5,000. J. Jones, two-story frame dwelling, 1107 Park avenue; cost \$5,000. D. Peterson & Co., two frame stores and hall, 1401 and 1403 Lake street east; cost \$5,000. D. Peterson & Co., three two-story frame dwellings in same vicinity; cost \$12,000. American Express Company, two-story brick stable, 1121 Western avenue; cost \$12,000. C. M. Winslow, seven three-story brick tenements; cost \$25,000. Johnson & Johnson, two-story dwelling; cost \$5,000. C. E. Gill, three two-story dwellings; cost \$5,400. A. Johnson, two-story dwelling; cost \$5,000. J. Gaines, two two-story frame dwellings; cost \$10,000. Bank of Minneapolis, four-story brick addition; cost \$40,000. R. E. Daniels, two-story dwelling; cost \$4,000. R. L. Berglund, three two-story stone veneer dwellings; cost \$11,000. R. L. Berglund, twelve two-story stone veneer dwellings; cost \$15,000. Mrs. E. Campbell, two-story dwelling; cost \$7,500. W. G. Tice, three-story tenement; cost \$16,000. F. E. E. Papst, six two-story dwellings; cost \$21,000. G. Rees, two-story stores and dwellings; cost \$5,000. S. H. Davis, two-story dwelling and barn; cost \$4,700. R. N. Gale, two-story dwelling; cost \$6,500. R. R. Gale, two two-story dwellings; cost \$6,300. W. W. Merrill, two-story dwelling; cost \$4,500. P. B. Woodlief, three two-story dwellings; cost \$7,500. B. S. Johnson, three-story brick veneer store hall and dwelling; cost \$6,000. H. P. Judson, two-story brick veneer dwelling; cost \$4,500. J. C. Beck, two-story frame dwelling; cost \$4,500. J. Ludlum, two two-story brick stores and dwellings; cost \$8,000. W. H. Leonard, two-story dwelling; cost \$8,000. Ella F. Rice, two-story brick veneer dwelling; cost \$6,400. Geo. E. McLean, two-story dwelling; cost \$7,500. Minneapolis & St. Louis Railway Company, brick boiler-house and smokestack; cost \$7,000. H. H. Anderson, two-story dwelling; cost \$5,000. C. J. Trafion, two-story dwelling; cost \$5,000. Isaac Fausett, two-story dwelling; cost \$5,000. Robinson & Chandler, two two-story dwellings; cost \$6,000. J. E. Keelyn, two-story dwelling; cost \$7,000. Homeopathic Hospital Company, alterations; cost \$3,800. Martin Byrnes, two-story dwelling; cost \$4,000. Harmon & Sprague, nine two-story brick stores; cost \$12,000. Gluck & Sons, three-story stone and brick refrigerator, addition; cost \$8,000. F. C. Griswold, two-story dwelling; cost \$5,000.

New Lexington, O.—The contract for the erection of the court house and sheriff's residence (J. W. Yost, of Columbus, architect) has been awarded Messrs. Hibbert & Schaus, of Newark; contract price \$84,698; two-story and basement, 80 by 96 feet, to be built of pressed brick, trimmed with sandstone; building to be commenced at once and completed on or before July 1, 1888. The court house will be fireproof, have slate roof and steam heat.

New Orleans, La.—Architect Fred. W. Wolf, of Chicago, Ill., reports: For the Southern Brewing Co., an \$80,000 brewery; under way.

Pine Bluff, Ark.—Architect B. J. Bartlett has prepared plans for a three-story brick hotel, to be erected for Mr. Truelock; estimated cost \$45,000; contracts not let.

Pine Ridge Agency, Dak.—Architect Otto H. Matz, of Chicago, Ill., reports: Industrial school buildings for education of Indian children, containing school-rooms for fifty; also dormitories, dining rooms, kitchen, workshop; also chapel with open timber roof; cost \$12,000.

Richmond, Ind.—Architect Sidney J. Osgood, of Grand Rapids, Mich., reports: Presbyterian church is nearing completion, roof on; cost \$35,000; Roberts & Kelly, contractors.

Sioux City, Ia.—Architect E. W. Loft has prepared plans for a three-story brick building, 25 by 90 feet, iron front, tin roof, to be erected for M. Dayton; cost \$5,000; contract not let.

Architect J. W. Martin has under way for Menler & Uepper, a three-story brick store building, 25 by 120 feet, iron front, tin roof; cost 6,500; under way; Townsend & Wakefield, builders.

Springfield, Ill.—Architects Bullard & Bullard report: For S. A. Bullard, two-story frame dwelling, 32 by 48 feet; furnace heat; cost \$2,800; under way. For N. Gassler, two-story frame dwelling, 33 by 50 feet; furnace heat; cost \$4,000; foundation in; Wm. Bettinghaus, builder. For Geo. W. Chatterton, addition, 20 by 40 feet, to brick store; cost \$2,000; drawings ready. For Edward Payne, two-story frame dwelling, 38 by 50 feet; brick basement, furnace heat; cost \$4,200; drawings under way.

St. Louis, Mo.—Architect A. Druiding, of Chicago, Ill., reports: For E. Hartman, a tannery building to cost \$10,000.

St. Paul, Minn.—Architect C. A. Wallingford reports: For J. L. Lovering, three-story brick-building, 100 by 70 feet; cost \$18,100; under way; Dowling & Russe, builders. For Allen Brown, two-story frame building, 30 by 50 feet; cost \$5,000; projected. For Mrs. Sarah Ward, two-story brick veneered building, 30 by 45 feet; cost \$4,000 projected.

Among the permits recently issued are the following: J. W. Imeson, three-story brick store, office and dwelling; cost \$8,000. J. Wagener, two two-story frame double stores and dwellings; cost \$9,000. J. Wagener, two two-story frame double stores and dwellings; cost \$7,000. T. S. Schurmeier, two-story frame dwelling; cost \$7,000. J. L. Lovering and Hiram Bacus, two-story brick veneered block; cost \$20,000. J. Stearns, two-story frame dwelling; cost \$4,000. M. Wickershiem, three-story brick double store and dwelling; cost \$15,000. J. Espey, four-story brick block stores; cost \$20,000. G. W. Gray, two-story brick store; cost \$6,000. Mary V. Otes, two-story basement and attic frame dwelling; cost \$12,000. Trustees Pilgrim Baptist church, one-story brick veneered church; cost \$10,000. C. La Chance, three-story block stores and dwellings; cost \$22,000. J. P. Grubben Lumber Co., two-story brick double store and dwelling; cost \$5,000. E. Boquet, two-story brick store and dwelling; cost \$7,000. M. D. Miller, three-story double brick veneer dwelling; cost \$10,000. A. Muir, two and a-half-story brick veneer dwelling; cost \$22,000. Mrs. J. S. Messner, two-story frame dwelling; cost \$8,000. Board of Education, steam heating apparatus and tin roof; cost \$14,000. O. & S. P. Crosby, four-story brick double store; cost \$13,000. Mrs. A. Stoddard, two-story frame dwelling; cost \$4,800. A. Blake, two-story frame dwelling; cost \$5,000. P. G. Schultze, two-story brick dwelling; cost \$7,000. Dayton Avenue Presbyterian church, stone; cost \$36,000. G. Clark, four-story brick block of stores; cost \$30,000. First Baptist church, two-story brick chapel; cost \$18,000. C. F. Kubles, two-story brick veneered dwelling; cost \$5,000. R. Martin, two-story brick boarding stable; cost \$5,000.

Vicksburg, Miss.—Architect Wm. A. Stanton reports: Brick school house; cost \$15,000; under way; Beck & Bros., builders. Frame school house; cost \$5,500; under way; Beck & Bros., builders. One frame school house; cost \$4,887; under way; Ryan & Bro., builders. Residence for C. O. Willis; cost \$8,000; under way; Curphey & Mundy, builders. Plans prepared for frame residence for S. Spengler; cost about \$20,000. The Colored M. E. Church building, after plans of Architect Price, of Philadelphia, is being constructed under my supervision. There are numerous smaller dwellings under way, costing from \$1,000 to \$4,000.

West Bay City, Mich.—Architect D. P. Clark reports: For Hon. John Welch, two-story frame, 35 by 60 feet; cost \$4,500; under way; Donovan & Holland, builders. For Bay City Building Co. (limited), Architects W. L. B. Jenney, of Chicago, and D. P. Clark have under way a five-story office and bank block, 75 by 100 feet, pressed brick, redstone basement, redstone and terra-cotta trimmings, plate-glass, etc.; cost \$60,000; under way; separate contracts. Several smaller buildings under way and projected.

Woodstock, Ill.—Architect Fred. W. Wolf, of Chicago, reports: For Zimmer, Hermann & Co., four-story brewery, 100 by 100 feet; cost \$30,000; contract not let.

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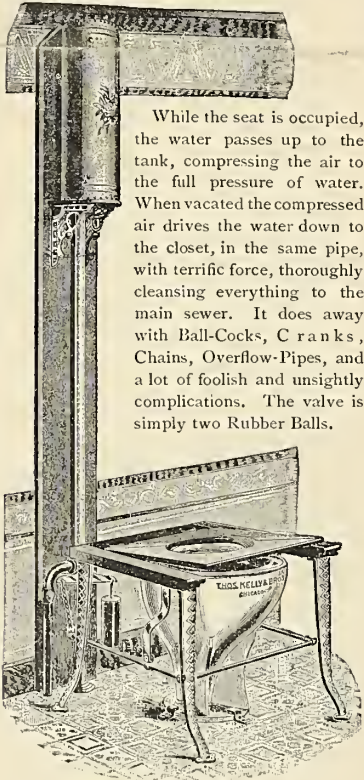


FIG. 3.
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THE Third Annual Convention of the Western Association of Architects will meet in Chicago on the third Wednesday (17th) of November next, and be in session three days. The convention will be held in the Weber Music Hall, corner of Wabash avenue and Jackson street. The Illinois State Association has taken upon itself the entertainment of the visiting architects, and every effort will be made to make the entertainment of visitors not only most enjoyable but profitable. Beside the regular notice to members, a special invitation to architects generally has been issued, as the intention is to make this convention a general reunion of all members of the architectural profession in the United States. The entertainment committee of the Illinois State Association, consisting of architects Samuel A. Treat, Louis H. Sullivan and Wm. Holabird, of Chicago, is well chosen, and nothing will be left undone that will contribute to the entertainment of visitors. In our November issue we will publish further full official information, but it is not too soon for every architect, whether a member of an architectural association or not, to arrange for his presence in Chicago upon the 17th day of November next, according to the invitations issued by the secretary of the association, published elsewhere in this issue.

THE annual meeting of the Chicago Architectural Sketch Club occurs November 8. In reviewing the year's work we feel that the club deserves words of congratulation. No kindred association in the country has shown a like amount of work performed, or general earnestness among its members. The adjudicating committee upon the club competition drawings has, by suggestion and criticism, influenced the members to use their best efforts, and while the competitions have not been all they could be in number of competitors, or in carefulness of study, there is a strong feeling that the work of the coming year will make up for any deficiency in the past. In behalf of the club we would not only voice its appreciation of the adjudicating committee—architects J. W. Root, L. H. Sullivan and W. L. B. Jenney—but also of the Builders' and Traders' Exchange, of Chicago, to which the club has for the past two years been indebted for a commodious meeting hall.

THE French government officially announces another *Exposition Universelle* to be held in Paris in the year 1889, from the fifth of May till the thirty-first of October. It will be located principally on the Champ-de-Mars, and will extend on both banks of the Seine for a considerable distance. The management will be vested in a council of three hundred members, sub-divided into twenty-three sections. In every department of France there will be, in addition, a local commission to develop and direct a universal participation in the exposition, and to raise funds for the special purpose of enabling mechanics, pupils, overseers and workmen of all kinds to visit the exposition for study and self-improvement. The exhibits are classified in nine groups, of which works of art constitute the first class, and education forms the second. The works of art are sub-grouped in seven divisions, painting, water-color and pastels, sculpture, engraving, architecture, carving and lithography. At this, all exhibits will be admitted free of duty, and will be protected from theft and depredation, by a special police provided by the administration. Care will also be exercised to prevent the unauthorized copying or reproduction of any article displayed, and especially to protect

patented goods. Water, gas, steam and all other motive power are furnished free to exhibitors, and no charge is made for space or the admission of goods. The selling price is to be marked, where possible, on every article, for the benefit of owner and visitor, and sales may be freely made, on condition that nothing sold shall be removed before the close of the exposition without a special permit. These and all other regulations seem to be on a scale of great liberality, and a distinguished success may be anticipated notwithstanding the frequency of expositions in these modern days.

THE "signs of the times" are that architecture in this country is just now in a transition state, whose outcome is to be regarded with peculiar interest. It seems quite within the range of possibilities that the distinctive American style, the absence of which has so long been a reproach to us, may be one of its results. The sudden, almost dramatic, termination of H. H. Richardson's remarkable career was apparently the one thing needful to establish him permanently on the pinnacle of fame and as the great exemplar for American architects. For some time past the growing impress of his influence has been marked in the designing of younger practitioners; now, the tide of imitation promises to sweep everything before it. Queen Anne and Victorian Gothic will disappear before Richardsonian Romanesque in all degrees and varieties of adaptation, imitation and appropriation; and while, as in all popular crazes, there will be much that is foolish and ludicrous, no doubt, the general result will be valuable and creditable. Hitherto, the style of American architecture has, on the whole, been English somewhat out of date, much as the fashions in this country used to be those which had prevailed in Paris a few seasons before. There has been of late a growing French influence, and, even, in some cases, a trace of German tastes in our style, but the substance of it was English, and many have thought, in view of our community of origin and tastes, that the day when American architecture would be emancipated from English leading strings was very far distant, if indeed it should ever arrive. Richardson's tastes, associations and training were distinctively French, and his style was the French Romanesque; yet his genius seems to have proved "stronger than blood" and to have severed American architecture for the time, at least, from English precedent. He has thus apparently taken the position in this country which Charles Eastlake and Norman Shaw occupy in England, and it is not impossible that the style he seems to have created here may in time perceptibly affect the architecture of England itself. That would be a friendly "turning the tables" on our mother country of which we might excusably be proud.

THE Art Institute of Chicago exhibits the energy and activity characteristic of the institutions of that city. The new building on Michigan avenue, corner of Van Buren street, approaches completion, and arrests attention by its beauty and imposing character. It is connected internally, though not architecturally, with the older building fronting on Van Buren street, and the two together constitute a considerable building devoted to the interests of art. The new building is thoroughly fireproof, and will contain the collections of pictures, statuary, and ornamental objects, while the school of drawing, painting and modeling will continue to occupy the present excellent rooms in the older building. The school rooms however are beginning to be crowded, the number of students last year approaching 250, and additional rooms will be provided in the new building. The long vacation terminated October 4, and all the

classes have begun again. A serious effort, which ought to be supported by the architectural profession, is in progress to establish a department of instruction in decorative designing. An evening class, under the very competent instruction of Mr. Louis J. Millet, of the firm of Healy & Millet, was maintained last winter, and the class will be continued with the same teacher both day and evening during the coming season.

THE instruction covers the principles and practice of designing as applied to house decoration, manufactures, illuminations, and the manifold uses of the present day. It includes free-hand practice, with pencil and charcoal, the symmetrical arrangement of patterns, the conventionalization of natural forms, the use of water colors, the study of historical ornament, in a word the essentials of the education of a designer. This work, of course, bears a close relation to the academic studies which have hitherto chiefly engaged the school. Fine art practice and decorative designing are properly supplementary to each other, and the closer the relations of the artist and the designer the better the productions of both. The best students of designing are often found among those who have had a severe training in drawing in the antique and life classes. This subject is well discussed by F. W. Moody, of the South Kensington school, in a little book called "Lectures and Lessons on Art," which ought to be read by every designer. In the present exposition there is an exhibition of students' work at the Art Institute, illustrating the usual branches of instruction in drawing and painting from the antique, and from life in various mediums, but we do not observe any examples from the designing class, perhaps because the work is as yet elementary. Mr. Lorado Taft, the sculptor, is to take the direction of the modeling classes this season, and has a plan of teaching design in relief, the success of which must depend greatly upon the demand for such instruction.

A RECENT dispatch from Washington, D. C., reads as follows:

In tearing out the plumbing in Secretary Manning's private office today, the workmen found, in a closet, a four-inch pipe and several smaller ones leading directly into the head of a sewer, without any trap or other contrivance to prevent the flow of sewer gas into the room. Mr. Manning's physicians pronounce his disease blood-poisoning from sewer gas, and say it was brought on, beyond doubt, by his sitting in that little room.

There are few cities in the country that have had a more terrible experience with sewer gas in buildings than Chicago. But there are other things which help to swell the mortality in our cities quite as much as sewer gas, and for which the latter is held responsible. Science and mechanism are guilty of many blunders, if their popular application can be taken as an evidence of their truthfulness. In no particular is this point so well shown as in the manufacture and use of base-burning stoves. We know that we take some risk in using these stoves as an illustration of this subject, but that risk is slight compared with the benefits which may arise from a proper understanding of the points which we wish to make. The convenience, the cleanliness, the cheerfulness, and the uniform temperature resulting from the use of anthracite base-burning stoves, are advantages of undisputed excellence. The economy is also a power in favor of these stoves. But mark the difference in the suppleness of motion, the flash of the eye, and the action of the mind, between those who spend their time in close rooms, heated by this process, and those who breathe a pure air, which has not been robbed of its oxygen, or charged with carbonic acid gas, by artificial heat, and the fetid exhalations of lungs and body.

TO awaken in the morning with a dull head, a parched throat, and a stomach which needs extra persuasion before it will manifest an affinity for food, are some of the evils

of breathing an air which, if manufactured at all, should only be applied to a lumber-drying kiln; but, worst of all, which renders the body as sensitive to the action of cold drafts and atmospheric changes as a needle to the pole. Without pointing out the remedy—too plain to all—or elaborating upon the science of this evil, it should be enough for all to be reminded of the fact that but few, if any, winter evils exist between Boston and the Mississippi which are so great as this. Further, the microscope demonstrates that typhus and typhoid fevers, and all their genera, diphtheria, etc., are generated by malarial poison. New York is an example, where the sewers and stoves murder 18,000 or more people annually, the death rate being over 34,000, while the normal rate should be about 12,000. The same evil prevails throughout the territory we have mentioned, and we do not believe that we can do a greater service than to urge a reform in stoves, sewers and ventilation. In the former we are glad to see a vast improvement within the past three years, but furnaces constantly fed by pure air and open grates are for the reasons given better methods of heating.

IT has long been supposed that steampipes and hot-air tubing used for house warming, were incapable of igniting wood by any temperature to which they could be raised, and such pipes are still often placed in the closest proximity to wooden joists, studding and flooring, with no more thought of danger than from the plumber's soilpipe and wastepipes. Yet in the light of recent discoveries this practice must be condemned as highly dangerous. Mr. James Braidwood, chief of the London fire brigade, states that wood exposed for some years to a temperature not exceeding 212° Fahrenheit, is partly carbonized, and will ignite without contact with flame. He cites, among other evidence, a fire in the Bank of England caused by a stove which stood on a cast-iron plate one inch thick, resting on a concrete bed of two and one-half inches thickness. The floor timbers beneath this concrete took fire from the heat of the stove. While water in the open air boils at a temperature of 212° F., the temperature of the boiling point rises under pressure. In the piping of a tall house, the pressure in the boiler of a steam-heating apparatus must be considerably increased, and with it the boiling temperature necessary to production of steam, and consequently the danger of fire.

ONE theory of the spontaneous combustion of wood is as follows: The wooden fibre long exposed to heat, as from steam or hot-air pipes, becomes slowly carbonized on the surface. In warm weather, this carbonized surface absorbs moisture from the atmosphere. On the approach of cooler weather, this moisture is given up, and the emptied pores absorb oxygen with a rapidity which produces a considerable rise in temperature, and may cause ignition. It is well known that substances in a finely powdered state burn much more easily than otherwise. This is illustrated by the ready combustion of iron filings in the flame of a spirit lamp. The same is true of wood in the form of shavings or sawdust, and the fact emphasizes the danger of packing steampipes in charcoal, as was formerly done, to prevent condensation. Another source of danger is illustrated by the following incident reported in the *Vienna Building Journal*: In the drying-room of a woolen factory a pine board was placed about four inches above a steampipe as a cover, and to prevent woolen fibres from lodging on the pipe. The building took fire, and the consequent investigation showed that the heat had distilled the resin from the pine board which, dropping on the hot pipe, ignited and set the premises on fire.

The Disposal of Sewage of Isolated Country Houses.*

BY WM. PAUL GERHARD, C. E., CONSULTING ENGINEER FOR SANITARY WORKS.

A SERIOUS and all-important problem presents itself to all builders of suburban and country residences, not located within reach of sewers. I refer to the question what method should be adopted by architects or householders to get rid of the liquid wastes from the household in a manner calculated to avoid at once all nuisance to sight or smell, all danger to health arising from the pollution of the soil, the water and the air, and all causes of contamination of water-courses, whether flowing streams, or ponds, lakes, estuaries and harbors. The problem is not at all a novel one, for nearly two thousand years ago Hippocrates discussed the same subject of the relation existing between health and soil, air and water, yet, if we contemplate, for a moment, the numberless filth reeking and disease-breeding privies and barbarous leaching cesspools which we encounter everywhere, and which apparently are accepted as necessary adjuncts to farm houses, summer residences, mechanics' dwellings, etc., we hope to be considered justified in again calling attention to the evil results of improper methods of sewage disposal, and in discussing briefly the proper remedies.

Let us begin with a consideration of the smaller farm houses, mechanics' cottages and laborers' dwellings. The crude methods usually adopted to get rid of all filth from these are the discharge of the liquids into some open ditch, or into some neighboring water-course, brook or pond, and the accumulation of the excreta in privy vaults. In other cases, slops are retained on the premises by pouring them directly in front of the kitchen window onto the surface of the ground, which is thus kept continually wet, and quickly becomes saturated with filth, or else the liquid sewage is stored in leaching cesspools or poured into disused wells. It seems unnecessary to explain at length the disadvantages and dangers of privies vaults and stagnant pools of slops, from a health point of view. The objections against them are well recognized, and hence such devices are now utterly condemned by all sanitarians as relics of primitive stages of civilization. The proper disposal of the slop-water of such small houses is so easily accomplished, wherever, as is almost always the case, a small vegetable garden, or lawn, or grape vine trellis, or an apple orchard adjoin the house, as to make us wonder why better methods than those indicated above are adopted as yet in comparatively rare instances. In all such cases, the sewage may, with advantage, be used to feed plants and fruit trees, or to irrigate the soil. The ruling principle should be to keep solid and liquid waste matters, as much as possible, apart, for this will facilitate the disposal of both. The kitchen water, soapsuds from washing, chamber slops, urine, and other fouled water, are easily disposed of, by a daily distribution in the garden, either by irrigation, or by subsurface irrigation. The slop-water should be collected every day in a tight tank and carried by hand, or carted in a wheelbarrow, to the garden, and there used to water plants, shrubbery and fruit trees, or to cultivate garden vegetables. Instead of by surface irrigation, the slop-water may be discharged into one or more lines of absorption drains, laid with open joints under the surface. For the smallest cottage, fifty feet of absorption tiles are sufficient, and in proportion, as the quantity of household sewage increases, the amount of tiles should be increased. The principal points of importance are that the sewage be applied to the soil while *fresh*, and before decomposition sets in, that it should be applied in moderate quantities only, to prevent oversaturation of the soil, that the sewage be applied on or near the surface of the soil, within reach of the oxidizing influence of the air and of the bacteria in the soil, and, finally, that the application be made intermittent, so as to give the soil, after each discharge, a chance to breathe, as it were, and to allow the finer solid particles to be oxidized and destroyed. An easy method of accomplishing the disposal of slop-water, where the house contains no plumbing fixtures, is to have near the house a hopper or receiver of wood or rustless iron, or, better, of earthenware, and provided with a strainer and a proper cover. From this a pipe may be carried underground to the absorption tiles, while the house sewage may be carried to and discharged into the hopper by means of a pail, thus sending rapidly a full volume of slops at proper intervals into the absorption tiles.

The solid excrements are taken care of in the case of small cottages quite as readily and inoffensively by adopting an earth or ash closet, in place of the usual privy, still so much *en vogue*, although long ago unanimously condemned by practical sanitarians. In the application of the dry earth system sufficient dried earth, garden loam, or sometimes coal ashes are mixed with the excreta to absorb all foulness, keep down all odor, and prevent putrefaction. Such earth closets work quite satisfactorily with only a little attention, and form a simple and cleanly substitute for the privy nuisance. They are manufactured in various

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grades, and with more or less complicated mechanism. As a rule, the simpler the arrangement, the better. If placed out of doors, the earth closet should not be located too far away from the house. The outer structure should be strong, substantial, with a good roof to protect it against rain or dampness, well lighted, well ventilated, not too much exposed to the rays of the sun, and preferably plastered on the inside as a protection in cold weather. A carefully kept, dry walk should lead to it from the house, and it is better to have the walk and the closet shed screened from view and from the prevailing winds. The excreta should be received in a movable wooden box, well tarred, or else in a galvanized iron pail, not too large, and of such shape and construction that it can easily be carried. The box or the pail should fit close up under the seat, and each time the closet is used, ashes or dry earth should be used as deodorizers, being thrown down either by a hand-scoop or by a mechanical apparatus. There can be scarcely any doubt about the economy, efficiency, and convenience of such apparatus in the case of small houses. The property of dry earth, of not only deodorizing, but also absorbing, and rendering harmless excreta of animals has long been well known. Some difficulty has been experienced in cases where the earth was kept too damp. According to recent observations a much smaller quantity of earth is required for earth closets, if the separation of the liquids and solids is at once effected. This may be accomplished by intercepting the urine under the seat, and removing it by a waste pipe. The closet is thereby more easily kept free from smell, and if properly used and well taken care of, it can be located in an extension of a dwelling without becoming a nuisance. The dry earth manure ought to be removed at frequent intervals, and in summer time used and dug under the soil in the garden attached to the cottage. In winter time it may be dried in outhouse and can then be applied over and over again. Ashes are sometimes used in place of earth, or else finely powdered charcoal, which latter is a well-known deodorizer. The latter can be applied with a mechanism similar to the one used in earth closets, and it is claimed that only about one-fourth the quantity will be needed. As charcoal is rather expensive this is an important consideration. Some also claim that removal need not be so frequent in the case of charcoal closets, but this is, at best, a doubtful advantage.

In cottages, or suburban residences of somewhat more pretension, the earth closet is sometimes located, for conveniences sake, in an extension of the cottage, and it then usually becomes desirable to have also a somewhat more convenient method of disposal of the slop-water, which would avoid exposure of the housewife or servant to the inclemencies of the weather. This may be secured by arranging a properly ventilated and trapped waste-pipe—a pipe two inches diameter is plenty large enough—to carry the waste from the kitchen sink, the laundry tub, and wherever this is provided for, from the bathtub, into a small receiving tank, located outside of the house, and placed below the depth to which frost usually penetrates. This tank may be a plain wooden box, or an earthen or iron tank, or finally a tank built of brickwork. It may be emptied in the plainest kind of an arrangement by hand, or else it may be discharged by an automatic device, such as a siphon, a tumbler tank, or other mechanical appliance. It may become useful, even in the case of small houses, to build some sort of a grease trap to prevent the grease from being discharged and finally clogging the small absorption pipes. It is, of course, assumed that the general topography of the lot is favorable to such an arrangement, in other words, that there is not a slope from the garden, or absorption field, toward the house, in which case disposal by gravity becomes impossible. If the earth closet is placed inside of a dwelling the same precautions should be observed which are taken in the case of water-closets. The ventilation of the apartment is an important matter, and should receive careful attention. As a rule, it is better to locate an earth closet in an isolated or detached part of the cottage. While an earth closet is inferior to the best water-closet, I have no hesitation in pronouncing it, if well taken care of, superior to many water-closets *as usually arranged and kept*.

The question whether a farm house or laborer's small cottage should be provided at all with plumbing work, and above all, whether it is wise to have a water-closet indoors, which we know requires a more or less complicated system of service pipes and a service cistern, is, more than anything else, one of convenience and comfort. The annoyance and cost of frequent repairs, and the difficulty in country districts of getting a mechanic to fix such apparatus when out of order, the danger of exposed pipes and traps freezing in mid winter, or sometimes the lack of an abundance of water for flushing, or the necessity of raising it by hand-pumping,—all these are considerations which may deter many from putting any plumbing work into their homes. It is undoubtedly much easier and less troublesome to deal with the sewage problem of cottages, if the strict separation of solids and liquids is adhered to. A water-closet in a house not only requires a larger discharge pipe than the two inch waste pipe for slop-water, but it complicates at once the whole arrangement. That it can be made quite safe, perfectly inodorous and inoffensive it is

not necessary for me here to assert. Those who have followed the recent improvements in house drainage and plumbing work will know that it is possible to select a good water-closet and fit it up in such a way as to be in all respects satisfactory. In point of cleanliness, I think it certainly stands ahead of any other device. Its advantages are many, but its disadvantages under certain conditions ought not to be overlooked. If a water-closet is used in a cottage, the solids should not enter the outside tank for slop-water, for they would soon clog the siphon or the absorption tiles, but they should be intercepted in a settling chamber and frequently removed. How this may be done will be explained later on when detailed reference is made to larger country houses.

(To be continued.)

Architectural Ironwork.*

BY C. W. TROWBRIDGE.

STRUCTURAL CAST-IRON WORK—CONTINUED.

BEDDING in and open sand requires a special floor, different from the ordinary clay floor on which flask and snap work are done. As the iron is poured into molds made directly in the sand floor, considerable depth of sand is required. Below the sand a layer of coarse cinders or other porous material is required, through which the gases can pass off. Sometimes lines of tile drain pipe are laid to points beyond the foundry wall. In other cases the gas is expected to come up around the molds through the floor wherever it gets a chance, but the porous layer at the bottom is important as furnishing a convenient place for the gas to go when the mold is full. Open sand is used only for rough footing plates or other pieces which can have one rough side. As an example I will describe the molding of a footing plate for a wall, such as mentioned when speaking of iron foundation.

Suppose we made our footing in 6-foot lengths; this would require each piece to be 6 by 12 feet, with six ribs running the 12 foot way. To mold this the patterns of the ribs only would be made, and bedded in the floor, spaced 12-inch centers, perfectly level, the sand rammed and leveled up between the ribs, and the top smoothed off with a straight edge. On the lines of the edges of the large bottom plate of the footing (which would be the top, as it is cast in the floor), boards would be placed and sand walls built up all around, say three inches high; then all ribs and all other patterns drawn out, leaving a mold in the floor, which only needs to be filled up with iron till it stands in the mold the proper thickness for the bottom of the footing, which is two inches in this case. What would in future be the bottom of the footing is now the top of the liquid iron, and exposed to the air. Any dirt, loose sand or bubbles will float to the top, and there is less probability of blow-holes in this than in any other kind of casting. Soon after the mold is poured it is customary to throw a few shovels of sand on the surface of the iron to retard radiation of the heat, and to make a skin on the casting. This sand floats on the top of the iron much the same as cork floats on water.

Bedding-in is similar in the first part of the process to open sand molding, but a cope or covering is added six inches or more thick, containing the shape of projecting parts, moldings, panels, or anything molded on top of the casting. This cope has pouring gates down through from the top, and risers, in which the fluid iron stands, giving additional pressure to the metal in the mold, which, in case of a cope six inches thick, is considered 225 pounds per square foot of surface of iron pressing against the cope. By calculating the amount of surface molders estimate how much pig they will have to pile onto the cope to keep it from floating off, or letting iron run out at the joints. Columns and cored work are often bedded in. Some eastern foundries are doing most of their architectural work that way. This is a very good method for lintels and heavy work where the metal is thick, but if there are thin places in the castings, the heat has a tendency to pass rapidly into the ground; so thin places cool faster than they can draw heat from thicker portions of the cast, resulting in shrinkage strains and trouble of various kinds. Where work is thin it is almost universally molded in flasks, which consist of a bottom board, the drag or bottom box, and a cope or top box, which lifts off the bottom box and allows the pattern to be withdrawn. These flasks usually conform approximately only to the size of the work molded, one flask often being used for several different kinds of patterns. They are generally made of wood, and while the cost of flasks is quite an item in the expense of a foundry, it cuts no such figure as it would if we cast columns on end and had to have iron flasks capable of standing high pressures. Suppose we want to cast a square interior column with ribs on the corners, flanges for bolts at the ends, and brackets on four sides for beams, girders, etc., the whole to be fireproofed when the building is finished. A wood pattern is made the size and shape of the outside of the column, allowing one-eighth of an inch in all directions for shrinkage. Brackets would be made loose, but their place is indicated by dowels, so they can be set in their exact positions. The end of the patterns would be continued out the whole length of the flask, the size and shape of the interior core of the column. This would mold a bearing for the ends of the cord in the sand mold to keep it in the proper place. The pattern would also be divided diagonally from corner into two halves, each the whole length of the pattern. The half of the pattern to go in the drag or bottom half of the flask would be laid on the smooth, plain board, called the follow-board, and the drag, which is open at both top and bottom, laid on it. Facing sand is now put in a thin layer over the whole pattern, and packed into the corners and odd-shaped places by hand; next comes a thick layer of coarser sand, then the molder shovels in a lot of filling sand, and proceeds to ram to an even pressure. It looks like a very simple matter if you watch a molder ramming a flask, but this is something that has to be done very skillfully. One hard stroke in the wrong place would surely spoil the cast. For instance,

* Paper read before the Chicago Architectural Sketch Club, August 30, 1886. Continued in Vol. VIII, No. 3.

the sand must be firm enough to stand the wash and flow of the iron entering the mold. When the mold is full, the pressure of the fluid metal, say two feet below the top of the pouring gate, is 900 pounds per square foot, and wouldn't fail to discover any soft places in the mold. The sand must also be porous enough to allow all the moisture to pass from the sand immediately surrounding the iron at once, as soon as the mold is filled, for it won't do to have the gas and steam blowing up through the iron, leaving blow-holes and cavities in the metal.

On one of the large buildings now in course of erection in this city, the foundryman discovered a little hole in the top rib of a column, and being of an inquiring disposition, he stuck a straw into the hole and found it went in nearly a foot. He then investigated, with a sledge hammer, and was surprised to find cavities nearly the whole length of the top rib. Evidently the molder had rammed the second layer of sand too hard above and around this rib, some of the gas was unable to escape, and had collected in this upper rib, making a long hole, which, of course, weakened the column. A small skin of sand and a little metal had formed around the outside of this cavity, consequently there was no outside indication of the defect, and only by accident this little hole showed where the trouble was. Similar investigations on other columns revealed the same trouble, and several of them got into the scrap heap. If the sand had been rammed harder still, the face next to the mold would have been loosened by the gas back of it, and an ugly scab come on the casting. After ramming the first layer of sand, others follow till the drag is full, then the bottom board is laid on top and the whole clamped together and rolled over into a nice level sand bed prepared for it. If this bed is not level the drag gets sprung and the column crooked. When the drag is nicely set in position, the clamps are taken off and the follow-board removed, the half pattern in the drag is exposed and the surface of the sand surrounding the pattern nicely faced with the trowel, and the upper half of the pattern set in place. Dry parting sand is sprinkled on to keep that in the cope from sticking to that in the drag. The cope is now set over the pattern, and the same operation in facing sand and different layers of backing gone through with as before. The cope differs from the drag in having bars crossing from side to side, every few inches, to hold the sand in place and allow the cope to be lifted off without any sand dropping out. These cope bars are cut out so that they clear the projections on the pattern an inch or so. Unless the molder is particular in ramming his cope he will leave soft places under each cope bar, which, when the cast is poured, will force a little, making ridges across the face of the work. Anyone passing along the streets in Chicago, when the sun is shining across the faces of columns, can see lots of cope bar marks even on our best buildings, making them look as if the columns thought of putting on state's prison garb. Round pins are put in through the cope for pouring gates and risers. Risers are usually put on the top of the highest points of projecting flanges or brackets, and the iron poured in at the other end of the cast. In this way any dirt collected in the mold will float along on top of the iron, and rising up come out at the riser.

The cope is lifted off and turned over, the patterns drawn out of both cope and drag, any broken places patched up and the facing powder of black lead, or some similar composition, dusted over the face of the mold and dressed down with hand tools. I saw a curious instance of the bad result of a mistake in facing powder. An apprentice mixed sea coal facing powder with facing sand for the first layer in the drag of a twelve-inch round column. When the mold was poured the facing swelled, making the sides of the mold wavy from the side joints down. Iron ran in over behind the little waves of the facing, so when the casting came out there was a lot of little tails hanging down from the joints. These were divided from the column by a thin film of facing so that they broke off, leaving a row of hollows in the sides of the column.

In some foundries when they have fine ornaments to cast onto thick heavy columns they skin burn the molds. This is done by dusting on a good, thick coat of ground rosin, mixed with flour, smoothing it down with hand tools, then sprinkling thoroughly with naphtha or gasoline and setting fire to it. This forms a hard crust, say $\frac{1}{32}$ or $\frac{1}{16}$ of an inch thick on the mold, and prevents iron washing off any of the fine lines of the ornament. I have heard men say that nice ornaments with fine lines could not be cast onto thick pieces; that the great heat would burn the ornament all out of shape. When anyone tells you such a thing as that ring your "chestnut bell" and bet them something fine they "don't know what they are talking about." Skin-burning is sometimes resorted to by molders who cannot run a big sill plate without it, as it prevents the mold chilling the iron as quickly as it would without that preparation. While speaking of sill plate let me say right here that it is a skillful man that can make a sill plate 6 by 12 feet, $\frac{3}{4}$ inch thick, and have it come out straight. If the flask springs, which is quite common, the center will be $\frac{1}{8}$ to $\frac{3}{16}$ inch thicker and cool last, which is sure to warp the sill more or less. There are also lots of other things to make the sill come crooked. This trouble is so common that I have heard experienced ironfounders say they never saw a sill over 3 to 5 feet that was straight. Fortunately these sills can be sprung straight when the columns and other work come on them. Architects should be lenient in the matter of superintendence in such things.

(To be continued.)

THE following recipe for a waterproof coating to prevent dampness in walls is given by a German technical paper. Take ten parts caoutchouc, ten parts pulverized chalk, twenty parts oil of turpentine, ten parts bi-sulphide of carbon, five parts colophonium and five of asphalt; mix thoroughly and shake, and subject to moderate heat until all soluble ingredients are dissolved. Brush the wall surfaces perfectly clean and apply this preparation with a broad brush as high as the dampness is likely to extend. It is said that if this coating is made and applied with proper care the wall will become permanently dampproof, and may thereafter be painted or papered with perfect security. It seems worth a trial.

An American Institute Competition Code.

CHICAGO, September 7, 1886.

Editors Inland Architect and Builder:

I inclose copy of schedule of competitions adopted by the American Institute of Architects sixteen years ago, which I promised to send you as soon as I could find a copy.

It will be observed that the competition for the Kansas City Chamber of Commerce was very nearly in accordance with the conditions therein expressed.

Yours truly,

P. B. WIGHT.

AMERICAN INSTITUTE OF ARCHITECTS.

SCHEDULE OF TERMS regulating Open and Close Competitions for Architectural Works, adopted by the American Institute of Architects in Convention assembled, November 8 and 9, 1870, and recommended to all Architects, Building Committees and Proprietors throughout the country.

1. The instructions must not require more drawings or estimates than are necessary in order clearly to explain the design, and should require that all the designs submitted be drawn to a uniform scale, which must be clearly defined, and that all perspectives required be drawn to the same scale as the geometrical drawings, and on a plane at the corner of the building nearest the point of sight; a deviation from which will cause their rejection.

2. In case the amount to be expended is limited, the instructions must state that an excess of ten per cent on the expense of executing any design, over and above the sum mentioned, will exclude it from the competition, the amount of expense to be determined by the professional experts in the jury; and in case the amount to be expended is not fixed, then the competitor may use his own discretion as to the costliness of the design which he makes.

3. A design will be excluded from the competition if sent in after the stated period, and if it contains deviations from the instructions. If, from any of the above reasons, all submitted designs are rejected, then the jury are bound to publish reasons which led to their verdict.

4. The period given for preparing the design must be long enough, not only for perfecting it and preparing the necessary drawings, but must make some allowance for the ordinary occupations of competitors. An explicit statement must be given as to the time when the decision on the merits of the designs is to be rendered, and that all designs shall be returned to the authors of the same. An architect's drawings are his own private property, unless paid for, in which case they are for the sole use and benefit of his client; but the actual drawings still belong to the architect who made them.

5. The designs should be submitted to a jury of experts, whose decision is to be final. One-half of the jury should be architects, and, in the case of an open competition for a public building, they should be selected by the Institute of Architects or by its Board of Trustees; the other half to be appointed by the Building Committee or owner. The jury must be named in the instructions, which they shall have sanctioned before publication. No person can be competent to serve as juror who submits a design, or is in any way interested in any design submitted, or who has not renounced all intention of participating in the execution of the work.

6. All designs submitted, in open competitions for public buildings, should be publicly exhibited two weeks before the decision is made.

7. In the case of open competitions the first premium must not be less than the amount which the architect would have received had there been no competition, and at least an equal amount should be divided among the other competitors, according to the merits of the designs submitted.

8. It is recommended that, in close competitions wherein the number of competitors is limited, a sum equal to the full value of one design be divided equally among the authors of all except the premiated design, which shall be compensated for as provided in the last preceding rule.

9. The instructions must state that in case the building is erected after any of the designs submitted in competition, it must be given in charge of the author of the first premiated design, who is to be employed at the usual compensation; and if any other designs, or part of designs, are used, it can only be done with the consent of the authors of the same; and they must be compensated for the full value of the designs or parts of designs used, irrespective of the premiums that may have been awarded.

10. The premiums must be awarded under all circumstances, for the designs which may have been admitted in competition.

11. It is recommended that in the schemes of competition it shall be provided that the names of the competitors shall not be known to the jury.

An Immense Railway Transfer.

THE recent conclave of Odd Fellows at Boston occasioned one of the largest transfers of passengers which has ever occurred in this or any country. The Chicago & Grand Trunk, and the Grand Trunk railways demonstrated their capacity for handling the largest passenger business called for by the transfer of 6,500 passengers in safety from Chicago to Boston, the only accident which occurred being the breaking of one pane of glass in a Pullman car by a tree which was blown over by the storm. To understand the enormity of this problem in railroading it is only necessary to state that there were required one hundred and sixty locomotives to carry the trains through to Boston. There were ten sections of seventeen cars each, one of which left every twenty minutes until all were moving. They all arrived at Suspension Bridge on time. The principal point of interest is the fact that this was performed without accident. There are other points of general interest, however, such as the checking and handling

of 1,600 pieces of baggage, the exchange of tickets for the 6,500 people, which required about twenty-four extra ticket sellers, and the marshaling and assigning to proper cars and seats, of this throng in one not over-large depot. The general passenger agent of the Chicago & Grand Trunk railway at Chicago, Mr. W. E. Davis, and his aids undertook and successfully carried out this task, which many prominent railroad men have said they would not wish to attempt.

Our Illustrations.

Design for "Tuscan Lodge" building, St. Louis, Mo., Ramsey and Swasey, architects.

High School building, Rockford, Ill., M. L. Beers, architect, Chicago. The plan is nearly square, about 80 by 80 feet, two-stories and basement, walls of pressed brick set in red mortar, with terra-cotta trimmings, shingle roof, painted; finish of clear pine; hardwood floors, daedened; a perfect system of ventilation, and every convenience and improvement make this a model school building; cost about \$30,000.

KANSAS CITY EXCHANGE BUILDING COMPETITION.

The descriptions here given accompanied the drawings submitted in the competition.

Design submitted by Architect James W. McLaughlin, Cincinnati, under the device of a letter K inclosed by a circle.

In submitting the accompanying design for your proposed Exchange Building, I have endeavored to adhere as strictly as possible to your printed instructions.

My plan was made before I received your bulletin, stating that the areas could extend out on the sidewalk, but I think it better to set back on the south and west sides of building, as neither the sidewalks nor the streets are very wide, and the effect of the building would be enhanced.

I propose fireproof construction throughout, iron floor beams, with hollow fireclay arches between, and columns and girders protected with porous terra-cotta.

The exterior of the basement to be roughly-hewn red Missouri granite, and the dressings of superstructure either of granite, or of Long Meadow brownstone; staircases of iron with slate or Medina stone treads. The public spaces in banks, the waterclosets and corridors to be tiled, and the remaining floors of yellow pine on strips, the interstices being filled with concrete mortar.

Design submitted by Architect W. W. Boyington, Chicago, under the device of a star.

Basement of brownstone, first story of brownstone and brown brick, the balance dark red brick with brownstone and terra-cotta trimmings; purple slate roof; corridor floors marble tiling; corridors wainscoted with marble; large and small halls are entirely surrounded by brick walls, so that if floors were built of wood, fires would be confined to parts of the building only.

It will be further observed that most of the partitions, and all the principal division and supporting walls are to be built of brick, as they are mostly direct bearings from the foundation up.

The plans have been carefully studied with a view to secure a permanent structure, to be erected on practical principles as well as theoretical. With the principal interior walls of brick dividing the floors into separate sections, the building can be made comparatively fireproof with wood floor joists, daedened above, and tiling on the lower or ceiling surfaces.

Waterclosets are placed nearly one above the other, simplifying the plumbing and sewerage.

Provision has been made for space for perpendicular elevator cylinders if that style elevator is used. If horizontal, then locate cylinders in sub-basement.

Each half of the building on every floor has two spacious vaults for general use.

If the restaurant should be required larger, there is plenty of available room under the sidewalk on that side which might be utilized.

The boilers will be located in the court nearest Wyandotte street.

There will be a track laid from in front of boilers to the front on Wyandotte street under sidewalk, where the coal can be dumped directly into car.

The heating of main hall will be by both direct and indirect radiation. Indirect, by coils in sub-basement, over which passes fresh air, conducted from thence to flues in the piers and delivered in the main hall about five feet above the floor. Direct, from coils placed under the windowsills with circulation from within the room.

Natural ventilation for both halls will be through the corner turrets.

The artificial ventilation will be by the Exhaust system, namely, by fans in the attic, discharging above the roof through the flue in right hand octagon of stair hall; also, fans in the basement, exhausting from the floors, so arranged to force air drawn through spray of water into the hall in summer.

Basement, first and principal stories to be ventilated in the same manner. Fresh air to supply the indirect coils can be brought from the top of the building through the left hand octagon flue of stair hall.

Please observe other vent flues of large dimensions, namely, the one in which the smoke flue is placed, and a corresponding one opposite on the other side of the building.

Janitor and watchman's rooms are to be placed in the attic, or they can occupy some of the rooms on the fifth floor about the courts.

NOTICE has been received that Erskine W. Fisher, whose specialties are Stettin Portland cement, German Asphalt mastic, etc., has removed from No. 78 Beekman street to the Wells building, No. 18 Broadway, New York.

Association Notes.

WESTERN ASSOCIATION OF ARCHITECTS.—Convention will be held November 17, 1886, at Chicago. John W. Root, Chicago, secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Thursday of every month, at 15 East Washington street, Chicago. Annual meeting first Thursday in October, 1886. Louis H. Sullivan, Chicago, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at St. Louis on the second Tuesday in January, 1887. Thomas B. Annan, St. Louis, secretary.

KANSAS CITY SOCIETY OF ARCHITECTS meets Monday afternoon of each week, at 4 o'clock. Annual meeting second Saturday in April, 1887. F. B. Hamilton, secretary.

THE ARCHITECTURAL ASSOCIATION OF IOWA, annual meeting, second Wednesday of January, 1887. C. H. Lee, Des Moines, secretary.

THE ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 4, 1887. Irving W. Kelley, Minneapolis, secretary.

KANSAS STATE ASSOCIATION OF ARCHITECTS meets at Topeka on the third Tuesday of January, 1887. H. M. Hadley, Topeka, secretary.

ASSOCIATION OF OHIO ARCHITECTS meets semi-annually. Next meeting third Thursday in January, 1887. O. C. Smith, Cincinnati, secretary.

ASSOCIATION OF TEXAS ARCHITECTS meets at Austin on the third Tuesday of January, 1887. S. A. J. Preston, Austin, secretary.

NEBRASKA STATE ASSOCIATION OF ARCHITECTS meets first Wednesdays in January, April, July and October each year. F. M. Ellis, Omaha, secretary.

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday, Builders' and Traders' Exchange. W. G. Williamson, secretary.

THE WESTERN SOCIETY OF ENGINEERS meets the first and third Tuesdays of each month at 4 o'clock P.M., at 15 East Washington street, Chicago.

THE MASTER PLUMBERS' SOCIETY, of Chicago, meets first and third Wednesdays of the month, 7:30 P.M., at 15 East Washington street.

ILLINOIS STATE ASSOCIATION.

At the annual meeting of the state association on the 7th instant, through a misunderstanding, a quorum was not present. A special meeting will be called for Saturday, 16th inst., at 2:30 o'clock. Beside the election of officers for the ensuing year, the sanitary law will be finally discussed, and the arrangements for the entertainment of members of the Western Association attending the convention, November 17, 18 and 19, will be made.

AMERICAN INSTITUTE OF ARCHITECTS.

A telegram has been received from Architect George C. Mason, Jr., secretary of the American Institute of Architects, stating that the place and date of the annual meeting of the Institute has not yet been decided upon, but will be at a meeting of the trustees at New York next week.

THE WESTERN ASSOCIATION OF ARCHITECTS' CONVENTION.

Four circular letters have been issued by the secretary of the Western Association of Architects. They should be read and noted by not only members of the association, but by members of the profession generally. Each is equally important.

The general notice to members as issued by the secretary, reads as follows:

WESTERN ASSOCIATION OF ARCHITECTS, SECRETARY'S OFFICE.

The third annual convention of the Western Association of Architects will be held in this city on November 17, 18 and 19. It is the expectation of the officers of the association that every member who can make it possible will be present. Every effort will be made by the officers to make this convention of the utmost interest to the members attending it.

The work of the local committee of arrangements will be greatly facilitated if members desiring to attend the convention will send notice of such intention to my address at as early a date as possible.

It would also be desirable if members who have business or matters of interest to present, would at once send notice of the same to me, so that it can be acted upon by the Executive Committee before the opening of the convention, and so that if found expedient such business or suggestions can be made a part of the fixed business of the convention.

JOHN W. ROOT, Secretary W. A. A.,
Chicago, October 5, 1886. 115 Monroe street, Chicago.

That calling for a general contribution of drawings to the exhibit in connection with the convention, should be responded to by every architect, and to the limit of the possibilities of his office. It reads:

WESTERN ASSOCIATION OF ARCHITECTS, SECRETARY'S OFFICE.

At each annual meeting of the Western Association of Architects, there has been an exhibition of drawings illustrating work executed by the members. Hitherto this work has not been as adequate as it should have been.

It is hoped that at the November meeting this year, each member will see that his contribution will fully illustrate his own work for the past year; for by this means we will have an admirable opportunity for study and comparison. Such a full exhibition, moreover, will tend to increase the *esprit de corps* and good fellowship of the association.

In selecting subjects, it should be borne in mind that water color, pen and ink, and pencil drawings will be acceptable; and that the object of the exhibition is not so much to show beautiful drawings, as the general character and interesting details of work actually executed.

The secretary of the association will be glad to receive all drawings, which should be boxed and shipped prepaid, to W. S. Thurber, 210 Wabash avenue, between November 7 and 14. Mr. Thurber will, after the convention, box and reship the drawings, charging only the cost.

JOHN W. ROOT, Secretary W. A. A.,
Chicago, October 5, 1886. 115 Monroe street.

The following is especially directed toward the members of the American Institute of Architects, and extends a cordial invitation to all such to be present at the Western Association Convention in November:

WESTERN ASSOCIATION OF ARCHITECTS, SECRETARY'S OFFICE.

Two years ago the Western Association of Architects was formed. Its object was to accomplish in the West the work already being performed by the American Association in the East, and then to coöperate with the American Institute in all questions relating to the higher character and increased influence of the profession.

To most perfectly realize these ends, the Western Association desires to be in the fullest accord with the older organization; so that, although each shall have such special regulations as best adapt it to its particular section of country, in all essential respects the sentiment and influence of the two bodies shall be identical.

The next convention of the Western Association will be held in Chicago, November 17, 18 and 19. The convention will feel honored by the presence at its deliberations of any members of the American institute who can be in Chicago at this time.

October 6, 1886.

JOHN W. ROOT, *Secretary W. A. A.*

A general invitation to all architects in regular and honorable practice in the United States has been issued. It cordially extends to these a hearty welcome to Chicago, and concludes the list of invitations, which are so general and so broad in scope as to make any architect within the Association or out of it an honored guest at this great convention. It reads:

WESTERN ASSOCIATION OF ARCHITECTS, SECRETARY'S OFFICE, CHICAGO.

The Western Association of Architects was formed two years ago, and now embraces about two hundred of the leading architects from all of the southern and western states. To accomplish most perfectly its ends in the increased influence and higher culture of the profession, the Association would like to enroll among its members as many practicing architects in good standing as possible. You are cordially invited to attend the next convention, on November 17, 18 and 19, with a view of identifying yourself with the Association.

October 8, 1886.

JOHN W. ROOT, *Secretary W. A. A.*

Notes on the Chicago Exposition.

IT is not the intention to enter into a description of all the various exhibits that I saw displayed in the annual exposition, but merely to confine myself to those that are mostly interesting to the architects and building trades. That there is a sameness in many of the exhibits is not to be denied, and it can hardly be expected otherwise when it is considered that the goods exhibited are nearly all from local firms, and come under our observation during the entire year; but, nevertheless, the articles exhibited have been selected with great care, and show the wonderful improvements that have been made in the various branches of trade. As usual, the parlor stoves, furnaces and ranges occupy a large space in the building, and the display is very commendable, the novelty of the designs, with the free use of nickel-plate ornaments, make this department an attractive one for owners of buildings. Prominent among the exhibitors is the old firm of Fuller & Warren Co. and the Abram Cox Stove Company. In connection with the display made by the Fuller & Warren Co., is a very handsome wood mantel, manufactured by the Butler Co., showing a happy combination of parlor stove and wood mantel.

A new invention, which is attracting considerable attention from builders generally, is located in the gallery over the main entrance. It is a mason's scaffold, which operates automatically and hoists the scaffolding, workmen and material as the wall is constructed. The working model has been utilized by Messrs. Lockwood and Kimbell to present an excellent exhibit of St. Louis hydraulic pressed brick, arranged so as to illustrate the utility and purpose of the scaffold. The pressed and molded brick, so well known to builders and residents of Chicago through the many handsome office buildings and residences constructed of this material, is, with the scaffold, well worth a special visit to the Exposition, the scaffold being so simple and practical as to call for its general adoption by mason contractors.

The Goodwin Gas Stove and Meter Co. have a display of their celebrated gas stove heaters and ranges, and their value is fully demonstrated by seeing them in practical operation. Gas, as a fuel, is claiming the attention of all householders, and this firm has advanced the manufacture of gas stoves to such an extent that they stand ahead in their line.

As from winter we glide into summer, so from the heat suppliers we drift into the refrigerators, which have become a necessity in our modern construction. Various firms make good exhibits of this class of goods, but for merit of novel devices, combined with all the improvements known to our day, the attention is specially called to the exhibits of the Chicago Refrigerator Manufacturing Cold Storage Co., and the Jackson Refrigerator Co., of 249 South Canal street. This latter refrigerator claims to have no equal for preserving perishable goods and to keep them uniformly cold, dry and sweet.

The Brown Bros. Manufacturing Company make their usual fine display of ornamental glass for vestibule doors, transoms, and bank and office counters, showing many new and attractive designs. A special feature of their exhibit is an obelisk made of their celebrated sidewalk and vault lighting material.

Wadsworth, Howland & Co., have a very fine exhibit of the various colors and varnishes in which they deal. This firm handle the Masury's railroad colors, and have built up an extensive trade in architects and engineers supplies, mathematical instruments, and all goods required by architects and engineers.

E. B. Moore & Co., of Chicago, have on exhibit their patent parquet flooring which is becoming very fashionable, their various designs and combination of the different woods make an endless variety.

The Chicago Wire and Iron Works have on exhibition a section entirely fitted up with goods manufactured by this company, also a good display of garden chairs, flower vases, and wire nettings. In the safe department, the Diebold Safe and Lock Company, and the Hall Safe

and Lock Company are prominent, the many new features introduced in the ornaments of their ponderous safes making this display very attractive.

An exhibit of great interest to owners of buildings, is the one made by the Scranton Manufacturing Company, of Chicago, their anti-friction steel hangers for barns, elevators, freight depots, etc., have acquired a well-deserved reputation, and the large sales of these goods reported by the leading hardware firms of the city, are a sure guarantee of the estimation they are held in the building trade.

For interior decoration, Edward Krispin, of New York and Chicago, have on exhibit samples of their perfect Solid Relief new decoration for walls and ceilings. This material can be made in any shape and design, and it is claimed by the manufacturers that it is durable and impervious to atmospheric influences.

The Somersworth Machine Company have on exhibition one of the heaters complete, set in brickwork and ready for use. The following letter was received by Mr. E. R. Ware, the western agent of this company: "I have had occasion a thousand times to thank you for what you have added to the comforts, not to say luxury of my home, by inducing me to adopt and introduce your system of heating. It gave more than satisfaction in every emergency last winter, and the knowledge of our having it in our house takes away all the dread of the approaching winter. Since I have been using your radiators, I have traveled a good deal, and have given some attention to the different kinds of heating apparatuses in use, and have yet to find one that I would exchange for mine in neatness and efficiency. Your furnace and boiler proved equal to my highest expectations. In connection with this exhibit, Messrs. A. Northrop & Co., of Pittsburgh, Pa., have a model of an iron ceiling which is fireproof, and easily applied in old buildings without removing plaster. This firm also manufactures all kinds of iron roofing."

The visit to the Exhibition would be deemed incomplete by our country cousins if they did not ascend to the dome and enjoy a birds-eye-view of Chicago. This is rendered comfortable and safe by a swift elevator placed by the Crane Bros. Manufacturing Company.

Obituary.

WILLIAM WALTER, the veteran architect of Cincinnati, died at his home, on Walnut Hills, on Wednesday morning, September 29, in the seventy-first year of his age. Mr. Walter was born in Hanover, Pa., December 28, 1815. The family removed to Cincinnati in 1828. His early education began at Hagerstown, Md., and was continued in the public schools of Cincinnati, he being among the first attendants. He served a regular apprenticeship to the builders' trade, thus having a practical experience combined with his study of architecture. In the year 1836 he was taken into partnership by his father, Henry Walter, the well-known architect of that day, and with him prepared the plans of the capitol building at Columbus, in 1840, and of that beautiful architectural structure, the St. Peter's Cathedral of Cincinnati, in 1842. Many prominent public and private buildings, in Cincinnati and other localities, bear testimony to the skill of this master architect. Close study and application to his profession for so long a time had its effect in a stroke of paralysis eight years ago. He partially recovered, but a second stroke left him very feeble, and the remainder of his days were passed at home, surrounded by a loving family.

Highly Recommended Brick.

THE Tiffany Pressed-Brick Company exhibit at the Exposition a wall of their pressed brick, of which, for the purpose of contrast, a part is set in black mortar and a part in white, the rich dark-red of the bricks harmonizing very effectively with both. The company have a large bed of very superior clay, and their machines and kilns are of their own invention, and especially designed and adapted for the peculiar quality of clay used. Thus it will be seen the Tiffany bricks are manufactured under the most favorable conditions possible, and as a result they are preëminent in form, closeness of grain and richness of color. So perfect are the workings of the machines and kilns that an unusually large proportion of high-grade brick is produced.

The company's works at Momence, Illinois, have been recently enlarged and are now capable of supplying in any required quantity brick uniform in color and graded to shade. The company has unsolicited testimonials from architects of the highest reputation testifying to their belief in the superiority of the Tiffany pressed brick. Among these are the following:

From William W. Clay, architect, Chicago, September 14, 1886:

Since the Tiffany Pressed Brick Company commenced to supply our market I have used many thousands of their fine pressed bricks, and they have given me great satisfaction. I prefer them to any other red pressed bricks that I know of. Their compactness of texture, and perfection of surface, and beauty of color all combine to make them a building material of the highest order.

From M. L. Beers, architect, Chicago, July 21, 1886:

I have used the Tiffany pressed brick in several buildings that have been under my supervision as architect, and I am highly pleased with them. I take pleasure in recommending them.

From Col. Arthur Crooks, architect, New York, January 25, 1886:

I consider the "Tiffany" one of the best bricks I have ever examined, and I feel confident that a ready market would be found here for such a perfect material.

From D. Adler, architect (President of Western Association of Architects), Chicago, August 25, 1886:

The Tiffany bricks that I have seen as samples in your office and in use as facing bricks on many buildings in this city are so remarkable for regularity of shape, smoothness of finish, firmness and uniformity of texture, and richness of color, that I must recognize them as the equals of any and the superiors of most of the high-grade facing-bricks manufactured in this country.

The Chicago office of the Tiffany Pressed-Brick Company, J. Van Inwagen, president, is at 175 Dearborn street, where samples of their product, testimonials and records of tests may be seen, and the full process of manufacture examined.

Mosaics.

THE Ainsworth covering has been adopted by the Holly Manufacturing Company, of Lockport, N. Y., for the Chicago Waterworks. The desire of the Holly Company to present as good a showing for their machinery, of course made the selection of a covering of great importance, and in the selection of the Ainsworth they indicate a decided preference and implied opinion of its superiority.

It is not generally known to members of the Western Association of Architects that a new lady member has been recently added, not only to its membership, but to its executive committee. Such might be the interpretation, however, of a card which reads: "Eugene H. Taylor, Mary M. Woodworth, married September 7, 1886, at Berlin, Conn. At home after September 23, at 42 Seventh street, Cedar Rapids, Iowa."

ARCHITECT M. SAKAMOTO, of Tokio, and M. Shimizu, of the Shimizu firm of contractors, of Yokohama, Japan, were in the city a week ago and were entertained by Architects Burnham and Root. This architect and contractor are making a tour of the world preparatory to the building of a palace for the Mikado, extensive public buildings and other works at Yokohama. After visiting the principal cities of the United States, these Japanese gentlemen will return home by way of Europe and India.

It is said to be a fact that there is a better demand in Chicago for building materials of the best quality than in any other city. An illustration of this is shown in the large orders being placed with Simpson Bros., for their Seyssel and Neuchatel rock asphalt work. The firm have secured the contract for the basement floor and the roof of the new Phoenix building. Among other work are 10,000 feet of flooring in the bottling department of the Schoenhofen Brewing Co., and the sidewalk of a block of twelve houses, northeast corner North Wells and Eugenie street, H. M. Hansen, architect.

THE works of the Illinois Terra-Cotta Lumber Company, at Pullman, were destroyed by fire on the third instant. From many indications the fire was pronounced incendiary in its origin. Fortunately the company have a large stock of their fireproofing material on hand, recent orders being in the kilns and little if any delay will be experienced in the filling of orders. During the short time this company have been manufacturing and placing fireproofing material in the West, their success has been phenomenal and the quality and adaptability of their product has received favorable recognition among architects generally. The company has commenced rebuilding their works upon a much larger scale than before and expect to turn out material within thirty days, and meanwhile have enough in stock to supply any ordinary and immediate demand.

Trade Outlook.

OFFICE OF THE INLAND ARCHITECT AND BUILDER, }
October, 1886. }

There is no difficulty in arriving at a fairly accurate understanding of building and trade interests at this time. We have before us the records of nine months' progress, and the evidence of the requirements of the next three months, at least. The volume of this year's business has been, up to date, sufficiently in excess of last year's as to suggest the inquiry, Why are prices for material and manufactured products better? Such an inquiry suggests another, viz.: Are they not good enough, would not higher prices lead to an undesirable industrial activity? Possibly. The salient features of the markets of the country are firm prices, strong demand, increasing capacity and threatening higher prices. The probability at this writing lies in favor of slightly stronger prices. Producing capacity everywhere is preparing to take advantage of it, and in that way preparation will prevent it from taking place. A study of prices of lumber for nine months exhibits very little fluctuation; railroad rates have been comparatively uniform. Supply in the Northwest has not expanded in proportion to demand. There is no accumulation of stocks, no sluggishness from failures, and no threatened depression. Buyers are making liberal purchases in all lumber markets. The iron and steel manufacturers are also exceptionally busy. During the past month business has been quietly expanding. So great is the capacity, that prices do not quickly respond to the improving demand. Mills west and east, and furnaces south and north are crowded with business as they never have been, and the manufacturers of motive power and of rolling stock have as much business as they can possibly execute this year. Everywhere the same reports continue to be made, consumption has reached an unprecedented limit. Builders have had a season that stands out boldly from all others in results. Work has been continuous, with the exception of a few weeks last spring. Work will be offered all winter, sufficient to engage a much larger force than usual during the dull season. A fair winter's activity is assured by the multitude of midsummer and early fall permits taken out. In all northwestern cities there is activity in building, and architects are not backward in predicting much winter and more spring work. Of course, the relative abundance of money is a stimulus. Then houses rent and sell readily. Real estate is not high except in certain central localities where buyers can afford to pay even exorbitant prices. The financial outlook is especially encouraging. The West is a constant borrower. The supply of money this year has been greater and the rate of discounts more reasonable. Banking facilities are extending. The list of new national and private banks which have started business in the West during the past twelve months shows the good progress made, and is indicative of a still greater expansion of financial capabilities. Our future building and industrial activity depends largely upon the abundance of money and the confidence of its holders in the productiveness of investments in any and all of the channels of trade and industry. With a continuance of abundant money, cheap material, satisfied labor and healthy industrial conditions, we may confidently rely upon another year of even more promising results than the one through which we are passing.

Synopsis of Building News.

Atlanta, Ga.—Architect Gust E. Leo reports: No work for next season has been ordered yet, but there are several orders in for fall and winter work, which I will report later. Have at present under way a two-story frame residence, 48 by 79 feet; cost \$7,000, for George S. Lowndes. For B. F. & R. Lee Walker, three-story basement house, 48 by 108 feet; cost \$20,000.

Boone, Iowa.—Architect W. L. Plack of Des Moines, reports: Opera House improvements, to cost \$4,200; under way; E. C. Culver, contractor.

Buffalo, N. Y.—Architects R. A. & L. Bethune report: For city of Buffalo, addition to police station No. 5; cost \$3,000; James Boland, builder. For same, public school No. 18; cost \$35,000; Thos. Savage and C. Kraft, builders. For same, public school No. 24; cost \$40,000; Schneider & Kraft, builders. For W. Guenther, store building; cost \$10,000; L. Leicest, builder. For Carl Lautz, residence; cost \$4,000; E. M. Hager, builder. For George Bell, residence; cost \$4,000; B. C. Dean, builder.

Architects Swan & Falkner report: For E. Husted, brick residence, to cost \$8,000; Wm. Schumacher, builder. For Emory Close, frame residence; cost \$4,500; Emory Close, builder.

Architect R. A. Waite reports: For David W. Burt, iron front building; cost \$40,000; H. C. Harrower, builder.

Architect F. W. Caulkins reports: For E. B. Smith, brick residence; cost \$10,000. Architect F. W. Humble reports: For John D. Larkin, frame residence; cost \$7,000, also stable, to cost \$1,500; Jacob Jaecle, builder.

Carey, Ohio.—Architect F. K. Hewitt, of Tiffin, reports: For School Board, two-story brick building, 76 by 83 feet, brick, cutstone and terra-cotta trimmings, slate roof; cost \$18,000; under way; J. P. Myers, builder.

Chicago, Ill.—There has been a considerable falling off in new work in the architects' offices during the past two weeks. How much of this is due to the trouble between the bricklayers and stonecutters cannot be estimated, but this certainly has had some effect. The trouble will probably be settled on a fair basis, and though there will be no large excess in building this fall and winter over that of last year, a fair amount may be looked for.

Architect John H. Wagner is preparing plans for Mr. Tomlinson for a five-story factory building, 123 by 50 feet, to be erected on the corner of Arnold and 23rd streets; cost \$30,000.

Architects Jenney & Otis: For E. Tolman, three-story residence, 30 by 70 feet, at 538 Dearborn avenue, Vermont stone front, rock faced, hardwood finish, steam heat; cost \$20,000.

Architects Patton & Fisher report: For Philip D. Armour, two blocks of flats, 360 by 56 feet, on corner of Dearborn and Thirty-third streets; apartments of six and seven rooms each, three-story and cellar; cellar and first story faced with mottled brown sandstone, upper stories, St. Louis pressed brick and terra-cotta; cost \$90,000; under way.

Architect Clarence L. Stiles reports: For Walter L. Newberry, three three-story residences, 50 by 68 feet, on Superior street, near the lake; brick, brownstone and terra-cotta trimmings, copper cornices and bays, slate and felt roof, skylights, closets and bath, stained glass, hot-air heat, hardwood finish and tiling, wood and marble mantels, electric bells, speaking tubes, etc.; cost \$15,000; contracts not let.

Architect Wilh. Griesser reports: Additions and improvements for P. Schoenhofer Brewing Company; cost \$30,000; contracts not let.

Architect Wm. Thomas reports: For T. M. O'Brien, three-story store and flats, 24 by 74 feet, Anderson pressed brick, brownstone trimmings; under way; Wm. Price, mason; A. Forten, carpenter.

Architect Julius H. Huber reports: For H. Unzicker, two-story dwelling, 26 by 57 feet, on Frederick street, Indiana pressed brick, terra-cotta trimmings; cost \$5,500; under way; J. P. Flick, mason; E. Ivens, carpenter. For F. Riedle, two-story dwelling, 28 by 50 feet, on Washington avenue, near Fifty-ninth street, Indiana pressed brick, terra-cotta trimmings; cost \$4,000. For B. Webber, alterations, etc.; cost \$2,500.

Architect L. G. Hallberg reports: For Julien Bros., two-story apartment house, 28 by 60 feet, on Larrabee street, Indiana pressed brick, Buff Bedford stone trimmings; cost \$7,000. For V. T. Parson, two-story dwelling, 25 by 27 feet, on West Jackson street, Indiana pressed brick, Bedford stone trimmings; cost \$3,000.

Architect R. G. Pentecost reports: For Henry Sweet, block of three-story stores and flats, 100 by 158 feet, corner of Wentworth avenue and Twenty-second street, Anderson pressed brick, Lemont stone trimmings; cost \$75,000.

Architect J. F. Doerr reports: For Mr. Strauss, three-story and basement brick and stone store building, 25 by 48 feet, corner Twenty-third and Portland; cost \$7,500. For J. Jochem, three-story brownstone and pressed brick building, corner Thirty-seventh and State streets, slate towers; cost \$10,000. For D. Fuller, three-story and basement building, 25 by 87 feet, Milwaukee pressed brick, brownstone trimmings; cost \$10,000. For Miller Bros., two frame cottages, 22 by 48 feet, Fifty-seventh and State streets; cost \$5,000. Two-story school building, 48 by 97 feet, at Humboldt, brick, stone trimmings; cost \$9,000. For Ferdinand Kreutzberger, two-story and basement building, corner of Portland and Bushnell, Indiana pressed brick, stone and terra-cotta trimmings; cost \$9,000.

Architect G. Bloedner reports: For C. Royalske, three-story flats, 22 by 65 feet, at 411 West Chicago avenue, Indiana pressed brick; cost \$4,500; under way; H. Hesse, builder.

Architect L. Lutken reports: For A. Mahlum, three-story flats, 21 by 72 feet, at 302 Ohio street, Indiana pressed brick, Lemont stone; cost \$6,000; under way; Tobias & Co., masons; W. A. Stephens, carpenter. For A. Johnson, three-story flats, 21 by 72 feet, at 308 Ohio street, Indiana pressed brick, Lemont stone; cost \$6,000; under way; Tobias & Co., masons; T. J. Reynerton, carpenter.

Architect Gregory Vigeant reports: For himself, three three-story dwellings, 50 by 68 feet, at 19 to 23 Scott street, St. Louis pressed brick; cost \$21,000; under way; Geo. Lehman & Son, masons.

Architect W. G. Barfield reports: For Hickson & Jukes, seven two-story apartment houses, corner of Fullerton avenue and Burling street, Indiana pressed brick, Buff Bedford stone, and terra-cotta trimmings; cost \$20,000; under way; Thos. Kleating, mason; Peter Jensen & Co., carpenters.

Architect John Krivanek has prepared plans for Max Kirkman, two-story and basement building, 24 by 80 feet, on West Twelfth street, near Wood; pressed brick, Lemont stone trimmings; cost \$5,300. For F. Silhanen, a three-story and basement building, 21 by 80 feet, at 142 West Taylor street; Anderson pressed brick, Lemont stone trimmings; cost \$7,300.

Architect P. F. Werges has prepared plans for August Bernt for a three-story and basement building, 24 by 65 feet, on Bissell street; pressed brick, Lemont stone trimmings; cost \$6,000.

Architects Sprague & Newell report plans for the following new buildings: For Chas. G. French, one two-story and basement residence, 36 by 55 feet, at Hyde Park, frame and pressed brick; cost \$9,000; also stable for same, 23 by 32 feet, frame; cost \$1,000. For W. J. Lukens, one two-story cottage, 22 by 44 feet, in Town of Lake, frame, cost \$1,500. For Mrs. N. F. Nickerson, two three-story and basement flats and stores, on 30th street, 40 by 82 feet, pressed brick with stone trimmings; cost \$15,000. For Wm. H. Mosher, four two-story and basement dwellings, 78 by 40 feet, on Jackson street, pressed brick and stone; cost \$10,000.

Cincinnati, Ohio.—Reported by Mr. L. Mendenhall: Everything seems to be going along, at least for the present, in a satisfactory manner, and if the laborer knows what is to his interests, no new questions will be opened up.

The new chamber of commerce building is progressing slowly, but satisfactorily, under the able superintendence of Mr. O. E. Elzner, who is fast becoming recognized, although a very young man, as a conscientious, painstaking architect, and one who is an ornament to the profession. Other imposing buildings, without particularizing as to place and architect, are in a satisfactory state of progress.

Architects Forbush & Green report as follows: For Matt. Ryan, two brick dwellings, slate roof, ten rooms each, with modern improvements. Frame church, at Madeira, Ohio, which, though small, is quite ornamental. For Geo. E. Day, Idlewild, Ohio, residence of seven rooms, two and a half stories, shingle roof, and cement and shingle front. For Alex. Reid, College Hill, frame house of nine rooms and shingle roof. For Chas. Aiken, College Hill, a similar house, of ten rooms. Prospects good.

Architects Plympton & Trowbridge have executed and have under way the following: For J. C. Carpenter, Home City, Ohio, frame, shingle and half timber, tile or slate roof, pine finish; \$3,500. For Mrs. M. Graff, Glendale, Ohio, cottage, six rooms, frame and shingle, shingle roof, pine finish; cost \$2,000.

Architect E. Buddemeyer has executed the following: For B. Barr, alterations, city; cost \$5,000. For H. S. Longley, Walnut Hills; cost \$6,500. For B. Whiteman, Sycamore street, city; cost \$7,000. Since the consolidation, Messrs. Buddemeyer, Plympton & Trowbridge have prepared drawings for the following: For L. C. Voight, Walnut Hills, frame and shingle residence, slate roof, pine finish; cost \$5,000. For H. Q. Clemy, Cavagna farm; complete half timber house, eleven rooms, bath, grand hall, tile roof, etc.; hardwood finish, first floor rooms; leaded cathedral and clear glass, casement sashes, with French espagnolette bolts, etc.; very unique; cost about \$9,500; contracts not let. For A. B. Ashman, State avenue, city; brick house, eleven rooms, shingle gables, slate roof, pine finish; cost \$6,500. For John A. Pitts, brick store and dwelling, two and a half stories, shingle roof; cost about \$2,700; not let. For John A. Pitts, brick dwelling, two and a half stories, shingle roof, seven rooms, plain finish; cost \$2,300; not let. For Otto Reich, Wyoming, Ohio; drawings being prepared for an eight or nine room stone, cement and half timber residence, tile roof; style, southern French; cost

about \$9,000. Have prepared sketches for the following: For C. C. Waite, lake cottage, Lake Chautauqua; cost about \$2,300; shingle and plaster. For C. C. Waite, double house, Glendale, Ohio; cost about \$6,000; shingle roof, etc. For Wm. Owen, Jr., Avondale, Ohio; cottage; cost about \$3,500; half timber and cement, shingle roof; besides other work. Prospects for the coming season decidedly good.

Architect H. E. Siter, Lincoln's Inn Court building, reports: Making plans for Fleischman's distillery at Riverside, to be erected on site of old distillery recently burned. There will be six different buildings, engine, boiler, yeast and other departments; common brick, and will cost \$30,000; also remodeling front and putting in new foundation for Odd Fellow's hall at 107 Martin street, to cost \$3,000.

Architect Gustave W. Drach, Lincoln's Inn Court building, reports: Block of four five-story brick stores, to be erected on site of old Henry House, for Wm. Miller, to cost \$25,000. Frame dwelling and stable for John Aud, to be erected in Clifton, to cost \$7,500.

Architect S. E. Des Jardins reports: Large five-story brick hotel, with freestone basement, at Kearney, Neb., to cost \$40,000. The hotel will have seventy-three bedrooms, besides office, baggage and store-rooms, also two semi-detached three-story brick dwellings on Park avenue, Walnut Hills.

Architect Jas. W. McLaughlin is making a sketch for the Carnegie Free Library to be erected at Allegheny, Pa., being one of the paid architects selected in that competition.

Architect Geo. W. Rapp reports: Four-story pressed brick store and flat on McMillan street, near Gilbert avenue, for Joseph Goldschmidt, to cost \$16,000; remodeling and building addition to Wm. Dair's dwelling in Harrison, Ohio, to cost \$10,000; remodeling front of Kauffman's brewery on Vine street; also building new malt kiln for same, and alterations for interior of Volksblatt office.

Architect Emil F. Baude reports: Germania Protestant Church, Price Hill, made changes in plan and enlarged from former design, to cost \$16,000. Bids have just been taken on this building. Ten-room pressed brick dwelling for George Weller, to be erected on Cutter, near Betts street, to cost \$6,000; eight-room pressed brick dwelling for Paul Kessler, to be erected on State avenue, near Liberty street, and double fourteen-room frame dwelling for Wm. Oberhellman, to be erected at Riverside, to cost \$5,700.

Architect Wm. Martin Aiken reports: Block of three two-story brick dwellings for Anderson Estate, to be erected on Mt. Adams; three-and-a-half story brick store and flat for Daniel Feeney, to be erected in Cumminsville. For A. D. Bullock, Esq., on Walnut Hills, a residence built as follows: First story brick, second story plastered, with slate roof; house contains eleven rooms; also stone dwelling for Charles Anderson, to be erected on the Grandin road.

Architect Emil G. Reuckert reports: Two and a-half-story brick dwelling for Edward Schriefer, to be located on Wheeler between Warner and McMillan streets, to cost \$12,200; block of five three-story pressed brick dwellings for August Beck, to be erected on the north side of Fifth street, east of Broadway, to cost \$30,000; four and a-half story pressed brick flat and store for Stewart Shillito, to be located on the east side of Vine street, between Twelfth and Canal, to cost \$14,000; double three-story stone front dwelling for F. G. Huntington, to be located on the northwest corner of Saunders and Lewis streets, Mt. Auburn, to cost \$9,000; double two and a-half-story frame dwelling for Henry Carnes, to be erected on State avenue, near Brighton, to cost \$5,000; two and a-half-story frame dwelling for Henry Meyer, to be located on Harvey avenue, Avondale, to cost \$3,700; four and a-half story pressed brick store and flat for Arend Kattenhorn, to be located on Main opposite Court street, to cost \$10,000; three-story brick hall etc., at Twelfth and Jackson streets for L. Schneider, to cost \$6,000; two and a-half story brick dwelling for George Albert, to be erected on Madison, near Boone street, to cost \$4,000; two-story pressed brick synagogue, to be erected on Carlisle avenue, near Park street, to cost \$5,300; two and a-half-story pressed brick and California red shingle dwelling for John Schneider, to be located on Carthage pike, Clifton, to cost about \$15,000; two-story brick dwelling to be erected at 45 Mulberry street for a Mr. Becker, to cost \$3,000. He also drew the plans for sheds and stable fixtures for The Jung Brewing Company's new stables on Freeman avenue. Mr. Reuckert says business has been better with him this season than last.

Architect Charles Crapsey reports: Frame parsonage for M. E. church at Hartwell, Ohio, to cost \$4,000; frame dwelling at Delta station for F. L. Stegemeyer, to cost \$3,500; four-story brick store and flat for J. F. Baldwin, to be erected at Spring and Liberty streets, to cost \$7,000, and six-story brick factory, under way, at Broadway and New streets, for Perkins, Campbell & Co., to cost \$20,000.

Architect W. R. Brown reports the following: M. E. Church, at Liberty, Ind., to cost \$10,000; Baptist church at Maysville, Ky., contract just let, to cost \$20,000, and brick dwelling at Helena, Ky., for James M. Mitchell, to cost \$15,000.

Architect Samuel Hannaford reports: Eight-story stone office building for W. H. Blymyer, to be erected on Main between Fifth and Sixth streets; the material will be Georgia marble; seven-story, material probably stone, store for Louis Seasongood, to be located on Race between Fourth and Fifth streets; extensive additions to Baum Street Convent; two frame dwellings to be erected at Westwood; fountain to be located in Clifton and presented to the citizens of that suburb by Henry Probasco, Esq.; the material will be bronze and granite, and will contain basins for drinking and also for watering animals; Children's hospital, Walnut Hills, material, brick with stone trimmings; Turner Hall, at Terre Haute, Ind., and some private dwellings, the plans for which are not quite completed.

Architect Theodore A. Richter Jr., reports: Two and a-half story brick dwelling of ten rooms, to be located at Cedar Grove, for F. W. Kallmeyer, to cost \$6,000; six-room

frame dwelling for John A. Johnson, Hartwell, to cost \$3,000; addition to brick dwelling at No. 4 Sherman avenue, for Henry Steinmeyer; two and a-half-story frame dwelling for Albert Squire, to be located at Eighth and Hawthorn avenues, Price Hill, to cost \$6,000, and two and a-half-story brick dwelling for A. Morrison, to be erected on Mt. Auburn.

Architect W. W. Franklin reports: Three-story brick school house, to be located in Hartwell, to cost \$25,000, stock brick and will be thoroughly ventilated; blue river limestone dwelling and stable for Henry Meyer, now in course of erection in Clifton, to cost \$18,000; brick dwelling at Mt. Lookout, for H. Zeigler, to cost \$12,000; frame dwelling for Mrs. D. H. Mears, to be erected on Rockdale avenue, Avondale, to cost \$8,000; frame dwelling at Ivanhoe, for Robert Lang, to cost \$5,000; three-story brick dwelling for Dr. C. O. Wright, to be erected on Seventh, near Smith, to cost \$6,000; Newort, Ky., school house, stock brick, to cost \$15,000; William Andrews, frame Dwelling at Gholson and Main avenues, Avondale, and frame hotel, to contain one hundred and fifty rooms, to be erected near Latonia race course at a cost of \$35,000.

Cleveland, Ohio.—Architect John Eisenmann reports: Brick and stone Sanitary Hospital building; cost \$5,000.

Colorado Springs, Col.—Architects Varian & Sterner, of Denver, report: For Dr. S. E. Solly, a \$20,000 stone residence.

Columbus, Ohio.—Architects Kremer & Hart report: An infirmary to be built in Wapconeta, Auglaize County, Ohio. Estimate \$34,800. To be let October 21, 1886. It will be brick, two stories high and basement; also an ice house, to be built for Brun's Brewery, size 75 by 21 feet, built of brick, three stories high; cost \$4,000; under way; Chas. Guthel, contractor; also the completion of two new engine houses from second story up; cost, each one, \$3,000; under way. House at Bucyrus, Ohio, for Mr. Kearsley, alteration and addition, frame; cost \$2,500; under way.

Architects Burnham & Root report: For W. C. Turner, on Lake Shore Drive, residence, Pennsylvania mica stone, tile roof, 60 by 80 feet; cost about \$70,000. For Charles Counselman, at Kenwood, residence, Pennsylvania stone, tile roof 60 by 75 feet; cost about \$60,000. For David K. Hill, on Michigan avenue, residence, Georgia marble, slate roof, 40 by 80 feet; cost about \$50,000. For J. H. Winterbotham, at Woodlawn Park, residence, pressed brick, slate roof, 40 by 70 feet; cost about \$20,000.

Denver, Col.—Architects F. E. Edbrooke & Co. have prepared plans for the Unity Church, brick and stone; cost \$18,000.

Architects Varian & Sterner report: For L. Bamberger, two-story and basement stone dwelling; cost \$16,000. For R. Curtis, two-story brick dwelling; cost \$10,000. For E. Dewey, two-story brick dwelling; cost \$5,300.

Architect John Roberts reports: For Chain & Hardy, three-story brick and stone store building; cost \$28,000.

Des Moines, Iowa.—Architect W. L. Plack reports: Present outlook is not very promising. The architects, as a rule, have no new work on the boards. For F. W. Thornton, frame cottage, 32 by 48 feet; cost \$3,500; contract let; Stuttsman & Gilbrick, builders. For "Seventh Day Adventists," frame church, 50 by 73 feet; cost \$5,500; under way; L. F. Gardner, builder. For John Watt, frame cottage, 32 by 46 feet; cost \$3,700; under way; R. H. Baldrick, builder. For Wm. M. Bartholomew, brick tenement, 40 by 45 feet; cost \$5,300; under way; John Bailey, builder. For John Harley, frame cottage, 26 by 40 feet; cost \$1,700; under way; A. Penisen, builder. For J. M. Davis, rebuilding store rooms; cost \$2,500; under way; A. Connelly, builder. For A. H. Marshall, two-story frame dwelling, 35 by 51 feet; cost \$5,400; under way; Roberts & Smith, builders. For Lehman & Helt, two-story and basement brick tenements, 48 by 88 feet, tin roof, galvanized iron cornice; cost \$14,000; under way; John Bailey, builder.

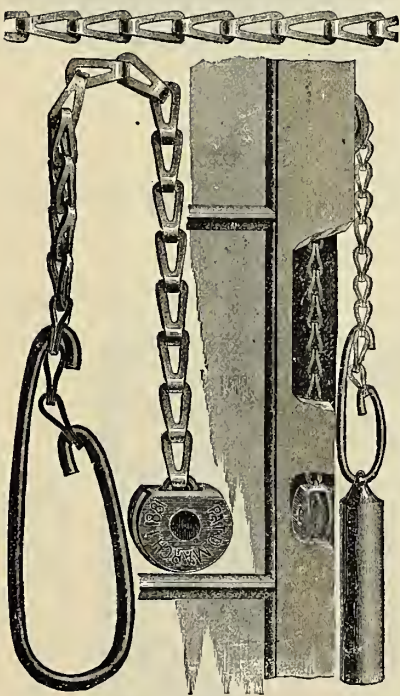
Elgin, Ill.—Architect Clarence L. Stiles, of Chicago, reports: For W. M. Du Bois, rebuilding of the Du Bois block, recently destroyed by fire; new building will be three-stories high, 80 by 80 feet; pressed brick front, stone trimmings; designed for stores and offices; cost \$20,000; work has been commenced on clearing away the debris, and plans for new building are under way.

El Paso, Tex.—Architects Stewart & Carpenter report: For Judge J. F. Crosbie, two-story brick residence; cost \$8,000; also stable, Carter & Linsley, contractors. For P. E. Kern, two-story brick residence; cost \$5,000; Dalton & Schumacker, contractors. For W. J. Ames, preparing drawings for residence; to cost \$3,000.

Fort Wayne, Ind.—Architect H. W. Matson reports: For S. Bard, two three-story brick stores, 40 by 75 feet, tin roofs; cost \$5,000; under way. For Fred. Roth, two-story double dwelling, 40 by 60 feet, brick, slate roof; cost \$5,000; projected. For the Keller Medicine Co., two-story and basement factory building, 40 by 85 feet, brick; cost \$6,000; taking figures. For Henry Schone, two-story brick dwelling, 24 by 60 feet; cost \$2,000; under way, Wm. Hiegemann and Miller & Schale, builders. Also eight district school houses in this (Allen) county; cost about \$1,800 each; situated in St. Joseph, Jefferson, Marion, Springfield, Eel River, Madison, Monroe and Adams townships. Also school house at New Haven; to cost \$5,000; nearly completed.

Hamilton, Ohio.—Architect Max Reutti reports: For F. Whitaker, two-story brick dwelling, slate roof; cost \$3,000; under way; Eisel & Mefford, builders. For Henry Lotz, two-story brick dwelling; cost \$1,000; under way; Jac. Rapp, builder. For Wm. Rembler, two-story brick dwelling, slate roof, bath, etc.; cost \$2,500;

[Continued on page 44.]



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PROPOSALS.

IRON WORK.

[At St. Joseph, Mo.]

OFFICE OF THE SUPERVISING ARCHITECT,
TREASURY DEPARTMENT, WASHINGTON,
D. C., September 27, 1886.

Sealed proposals will be received at this office until 2 P. M., on the 13th day of October, 1886, for furnishing and fixing in place the iron columns, girders and beams required for the postoffice, etc., building at St. Joseph, Mo., in accordance with drawings and specification, copies of which and any additional information may be had on application at this office or the office of the superintendent. Bids must be accompanied by a certified check for \$500.

M. E. BELL,
Supervising Architect.

SCHOOL HOUSE.

Sealed proposals will be received at the office of the Board of Education, third floor, City Hall building, Chicago, up to the hour of 12 o'clock at noon of December 1, for the various branches of labor and material required in the erection of an eighteen-room building to be erected on Twenty-third place, near Portland avenue, in accordance with the plans and specifications prepared by J. J. Flanders, Esq., architect of the Board, and which may be seen at the office of said architect, and at the office of the Board of Education, as follows: Masonry, custome, carpentry, lathing and plastering, plumbing and gasfitting, galvanized iron, gravel and slate roofing, painting and glazing, sewerage, cement paving, wire window guards, iron pipe railing, and for steam heating and ventilation by the fan system.

Proposals must be made on the regular printed form to be obtained at the office of the architect and be in strict conformity with the instructions to bidders printed thereon.

THOMAS BRENNAN,
PAUL O. STENSLAND,
JOHN W. GARVY,
Committee on Buildings and Grounds.

under way, Math. Arent, builder. For Geo. W. Hughes, brick stable, slate roof; cost \$1,900; under way, F. Crompton, builder. For St. Stephen's Church, cemetery vault; cost \$800, Geo. Getz, builder.

Hot Springs, Ark.—Judge Boyle, of Memphis, Tenn., has let contract for the erection of a two-story frame hotel building to P. J. Ledwidge for \$5,575.

Jonesboro, Ark.—G. W. Culberhouse is erecting a two-story brick store; to cost \$6,000; H. G. Seymour & Bro., architects and builders.

Moberly, Mo.—Architect E. Cook reports: Present condition quiet, and outlook for building very poor.

The Florence Hotel, recently damaged by fire, is being rebuilt at a cost of \$6,000; Jas. Sandisan, builder. Moore & Kimmel are building a two-story brick building, 25 by 70 feet; cost \$2,500; for Mr. Fisher. Plans are being prepared for Werner Fennel, for two-story brick business block, 25 by 50 feet; cost \$3,000.

Mobile, Ala.—Architect James H. Hutchisson reports: Present condition and outlook for building good. For Adam Glass, repairs, elevator, etc.; cost \$3,500. For P. D. Barker, repairs; cost \$2,000; Rosette & Fincher, contractors. For Colored Baptist Church, repairs; cost \$1,200; John Smith, contractor. Miscellaneous repairs on three buildings; cost \$4,300.

Monroeville, Ind.—Architect H. W. Matson, of Fort Wayne, reports: For G. W. Brandeberry, two-story frame dwelling; cost \$2,500; under way; Fred Boester, builder.

Mount Vernon, Mo.—Architects Abbott & Hohenschild, of Springfield, report: Two-story brick school house, 44 by 64 feet, furnace heat; cost \$6,000; E. H. McEwin, builder.

New Corporations.—The New England Anderson Pressed Brick Company, at Chicago; capital stock \$200,000; incorporators, James C. Anderson, Stillman R. Bingham, Frank D. Everett, and John C. Cushman. The Cool-Air Drying and Ventilating Company, at Chicago; capital stock \$500,000; incorporators, Francis A. Riddle, George A. Brine, and John S. Stevens. The Decorative Design and Color Company, of Chicago; capital stock \$15,000; incorporators, Frederick N. Atwood, George Barry, and Francis M. Nichols. The Tiffany Pressed Brick Company of Chicago filed a certificate of increase of capital stock from \$200,000 to \$250,000. The Detroit Motor Company, of Detroit, Mich., has been incorporated. Capital stock \$100,000; F. A. Beades, John T. Liggett, 525 Second street, and Wm. C. Mayberry, incorporators. The Watersmeet Lumber Company, of Menominee, Mich., has been incorporated; capital stock \$100,000; Jas. A. Crozer, Julius Ruprecht, and H. P. Bird, incorporators.

Omaha, Neb.—Architect J. W. Ross, of Davenport, Iowa, reports: Plans in preparation for house for C. Orcutt, to cost about \$15,000.

Ottumwa, Iowa.—Architect Edward Clark reports: For Street Car Company, two-story frame car barn, 27 by 53 feet; cost \$750; projected. For H. P. Graves, remodeling Hotel Bristol; cost \$650; under way. For J. B. Jeffries, two-story brick, stone and iron business block, 41 by 60 feet; cost \$2,400; A. D. Smilt, stone work.

Oxford, Ohio.—Architect Max Reutti, of Hamilton, reports: For Board of Education, two-story brick school house, slate roof; cost \$20,000; Lloyd & Hewitt, builders.

Pittsburgh, Pa.—Present condition is quite encouraging. Architects Bickel & Brennan report: For H. G. Imhoff, frame stable, 52 by 32 feet; cost \$3,000; under way; Geo. H. Rodgers, builder. For Jonas R. McClintock, two

and one half-story frame dwelling, 34 by 56 feet, slate roof; cost \$5,000; under way; Geo. H. Rodgers, builder. For Eva Wolf, two-story and mansard brick dwelling, 21 by 56 feet; cost \$5,000; under way; Wm. Bowersmith, builder.

Architect Wilh. Griesser, of Chicago, Illinois, reports: For Winter Bros., brewery, to cost \$50,000; contracts being let. For Nic Kessler, brewery, to cost \$45,000; contracts let.

Richmond, Va.—Architect B. J. Black reports: Present outlook is gloomy, little or no work in office at this time; expect a very dull fall. For Charles H. Whitlock, two three-story and basement dwellings, 25 by 96 feet each, brick, with brownstone trimmings, tin roof; cost \$7,000 each; contracts not yet closed. For Alvis Rick, two-story brick, 18 by 60 feet, tin roof; cost \$2,000; under way; Joseph Heppert, builder. For Charles Gasser, two-story brick, 18 by 60 feet, tin roof; cost \$2,000; under way; Joseph Heppert, builder.

Springfield, Ill.—Architect Geo. H. Helmle reports: For B. M. Griffith, pressed brick and stone building, 80 by 60 feet; cost \$18,000; plans completed; builders estimating. For Chas. H. Helmle, three-story pressed brick and stone building, 20 by 80 feet; cost \$6,000; under way; Buck & McKee, builders. For Joseph Irwin, two-story brick dwelling, 30 by 50 feet, furnace heat; cost \$3,500; projected; Joseph Irwin, builder. For Edward Brown, two-story frame dwelling, 32 by 36 feet, furnace heat; cost \$3,500; under way; James L. Powell, builder. For Wm. Rapps, two-story brick and stone dwelling, 36 by 40 feet; cost \$3,000; under way; N. Ritter, builder. For Mrs. A. Ammann, two-story frame dwelling, 30 by 30 feet; cost \$2,000; projected. For Board of Education, two brick and stone school houses, eight rooms each; cost when completed, including steam heating, \$20,000 each; buildings under way; \$7,000 to be expended this fall; Wm. White, builder. For First Congregational Church, stone addition, 40 by 80 feet, for lecture room and parlors; cost \$16,000; under way; John T. Rhodes & Bro., builders.

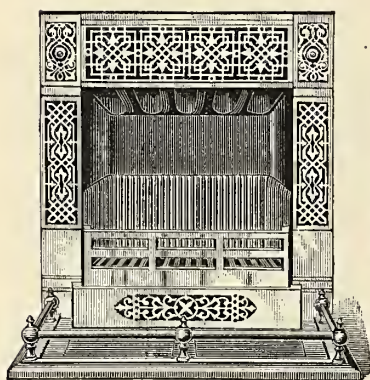
Springfield, Mo.—Architects Abbott & Hohenschild report: Building outlook fair, several plans on the boards. For school board, two-story brick building, 48 by 72 feet, galvanized iron cornice, slate roof, Ruttan furnace; cost \$7,920; under way; Anderson & Smith, builders. For Norman Gibbs, two-story dwelling, 30 by 50 feet, steam heat, electric bells, plumbing, etc.; cost \$5,400; under way.

St. Paul, Minn.—Architect Geo. Wirth has prepared plans for the Jackson street M. E. Church, Rev. Robert Forbes, pastor, for two-story stone building, 89 by 106 feet, to be built of stone; cost \$70,000; foundations laid; Mr. Roach, general contractor for entire work.

Toledo, Ohio.—Architect J. L. Stratton reports: For William Metzger, two-story and basement residence, 25 by 90 feet, brick, stone basement and trimmings, galvanized iron cornices, tin roof, hardwood finish and tiling, closets, bath, stained glass, skylights, hot-air heat, marble mantels, dumb-waiters, conservatory, etc.; cost \$8,000; under way; general contractors, Dawson & Anderson; masons, Toledo Stone Co.

West Bay City, Mich.—Architect D. P. Clark reports: For the city, two-room addition to Second Ward school building, frame; cost \$1,500; Sylvester Bard, contractor. Same for Fifth Ward school building; cost \$1,900; E. J. Pfeifer, builder. Two-story brick addition to First Ward school building, 36 by 28 feet; cost \$4,000; receiving bids. Four-room frame school building for Third Ward, 100 by 65 feet; cost \$5,000; plans under way. For Thomas Walsh, two-story frame dwelling, 30 by 52 feet; cost \$1,600. For West Bay City Manufacturing Company, frame cottage, cost \$9,00; Plans in preparation.

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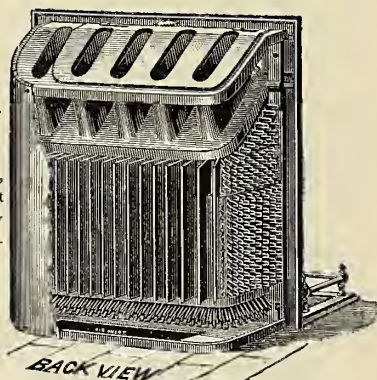
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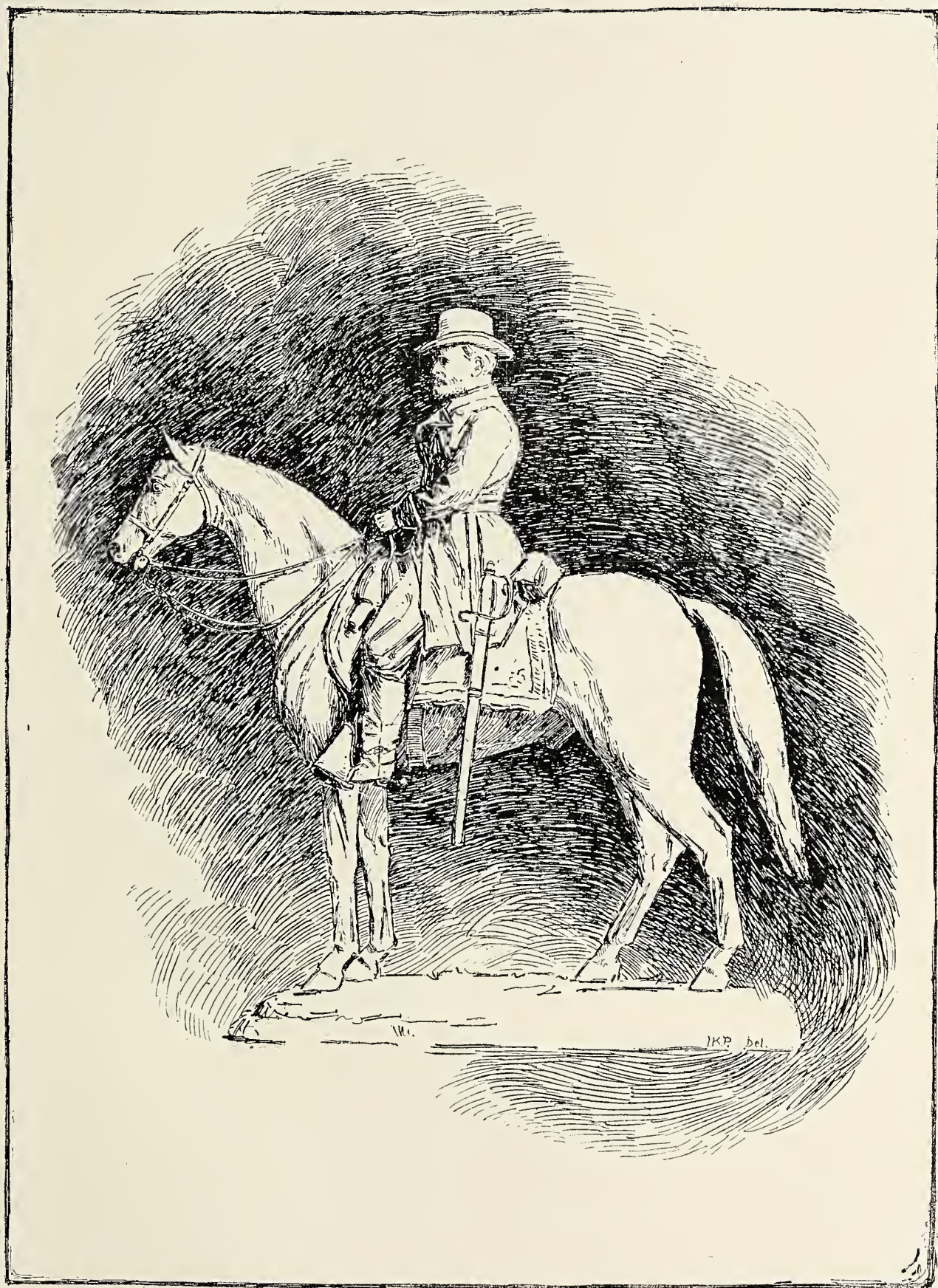
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FIRST PREMIATED DESIGN OF EQUESTRIAN STATUE FOR GRANT MEMORIAL, CHICAGO.

BY LOUIS T. REBISSE, PROFESSOR OF SCULPTURE, CINCINNATI UNIVERSITY, CINCINNATI, OHIO.



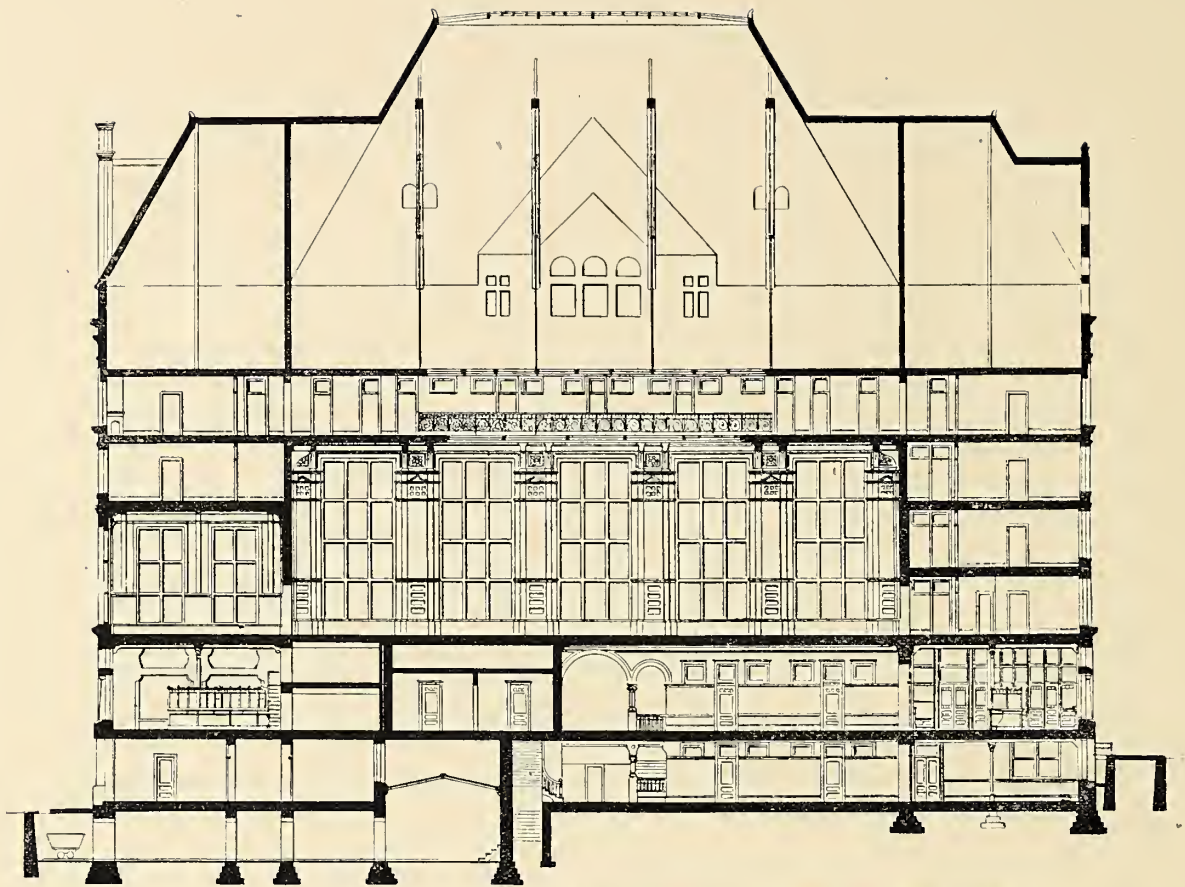
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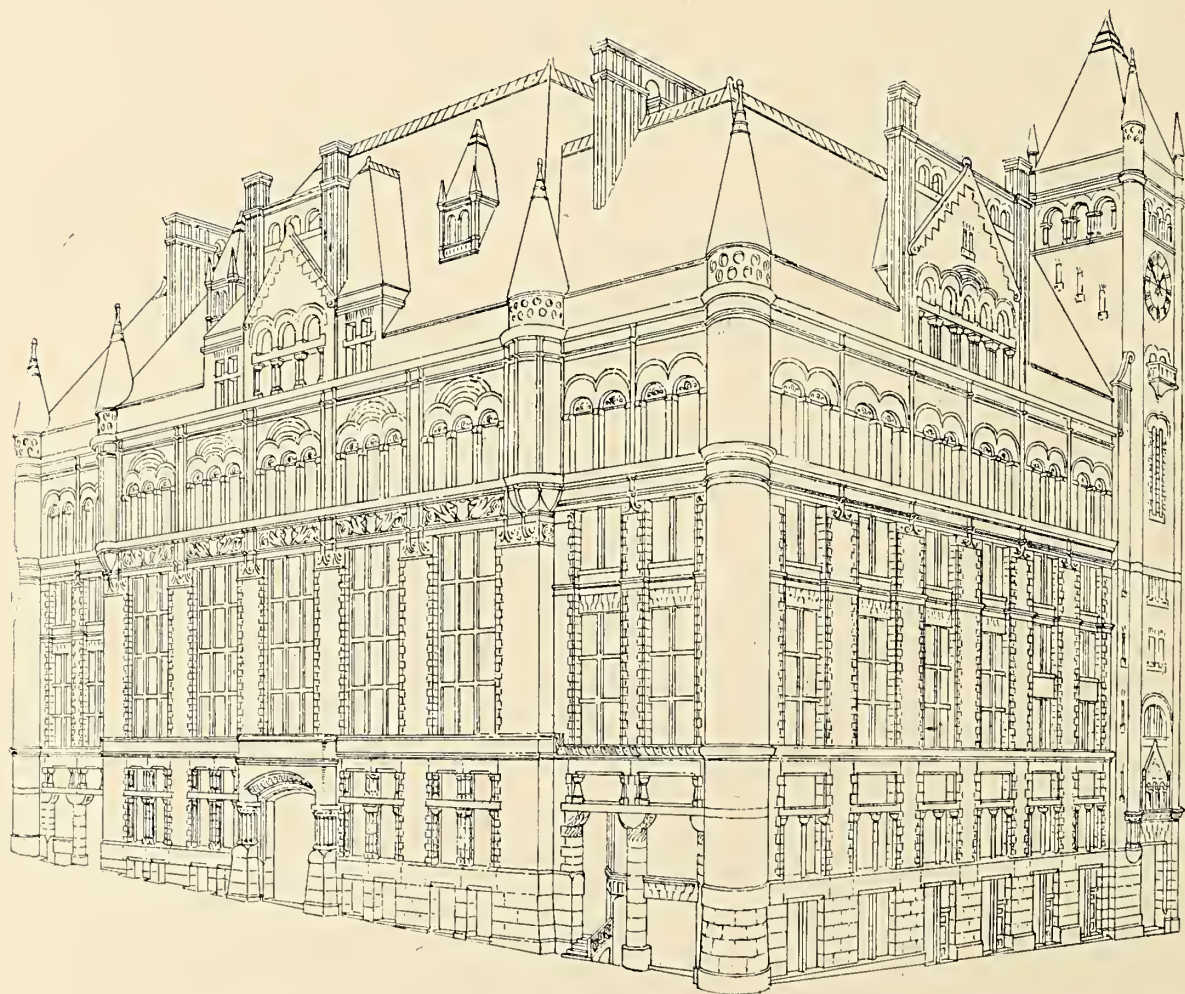
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LONGITUDINAL SECTION ON LINE "A"



PERSPECTIVE VIEW

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COMPETITIVE DESIGN FOR KANSAS CITY EXCHANGE BUILDING,
SUBMITTED BY "STAR," W. W. BOYINGTON, ARCHITECT, CHICAGO.





ELEVATION ON CENTRAL STREET



ELEVATION ON WYANDOTTE STREET

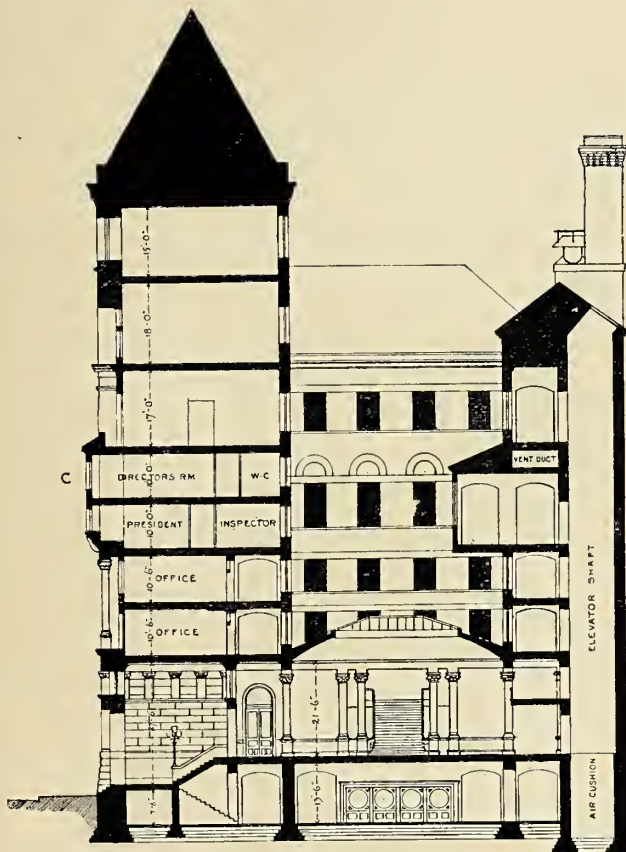
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COMPETITIVE DESIGN FOR KANSAS CITY EXCHANGE BUILDING,

SUBMITTED BY "K," JAMES W. McLAUGHLIN, ARCHITECT, CINCINNATI.

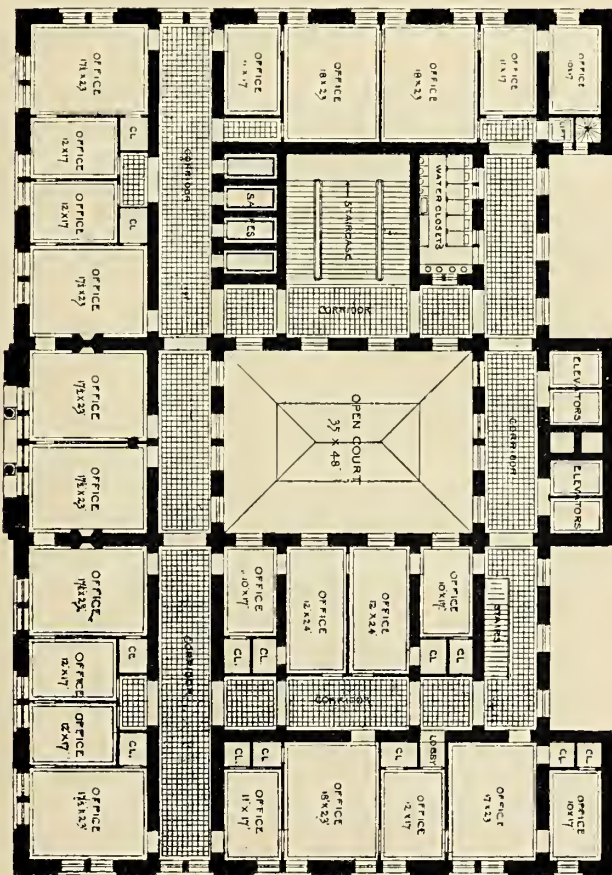


TRANSVERSE SECTION
THROUGH C-D

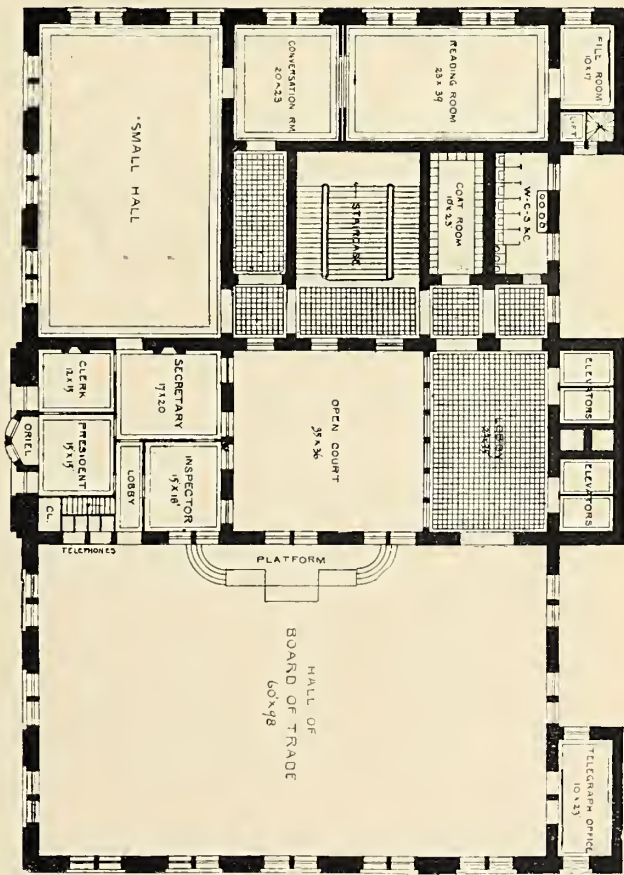


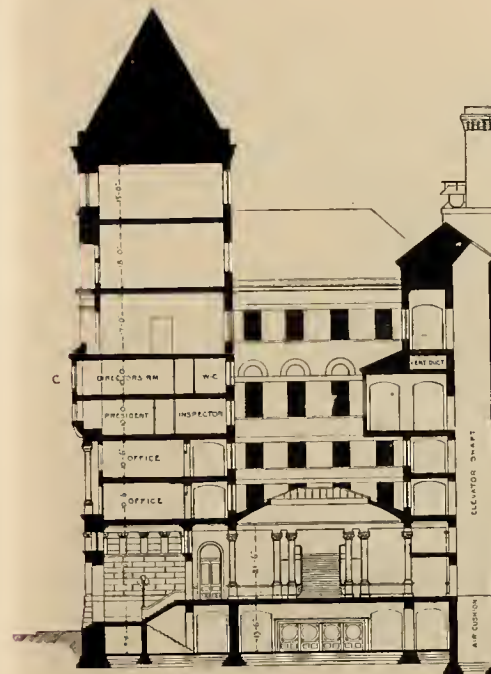
LONGITUDINAL SECTION
THROUGH A-B

PLAN OF 2ND & 3RD FLOORS.

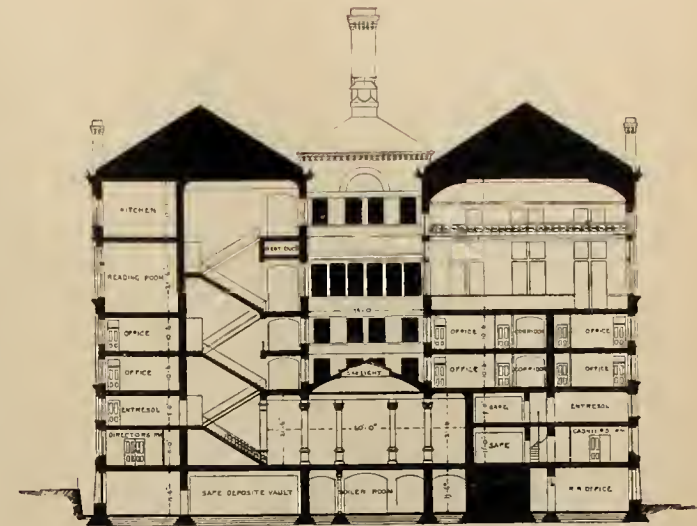


PLAN OF FOURTH FLOOR





TRANSVERSE SECTION
THROUGH C-D



LONGITUDINAL SECTION
THROUGH A-B



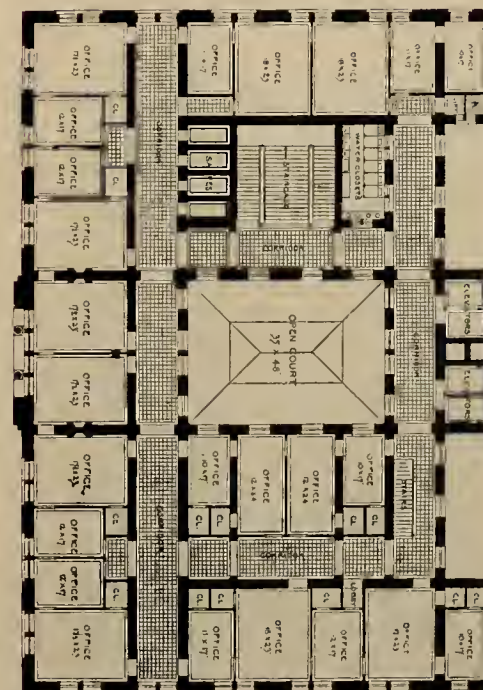
ELEVATION ON CENTRAL STREET



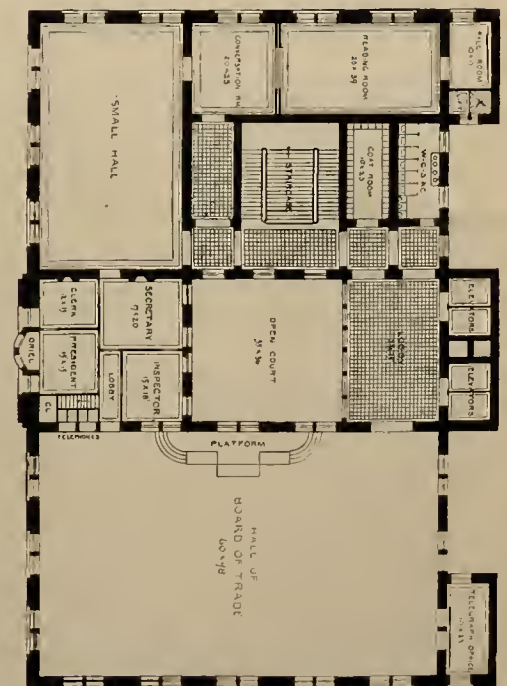
ELEVATION ON WYANDOTTE STREET

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PLAN OF 25 & 35 FLOORS.



PLAN OF FOURTH FLOOR



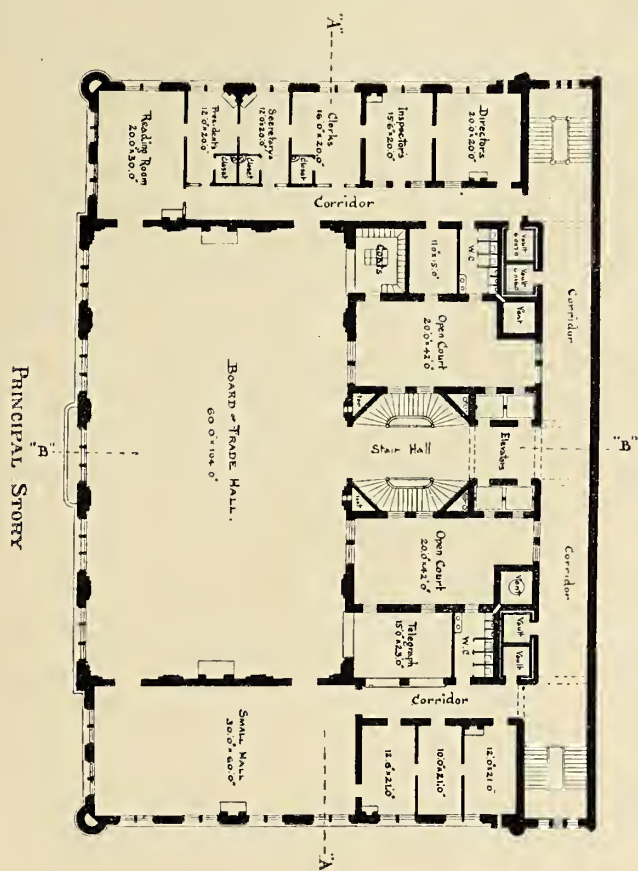
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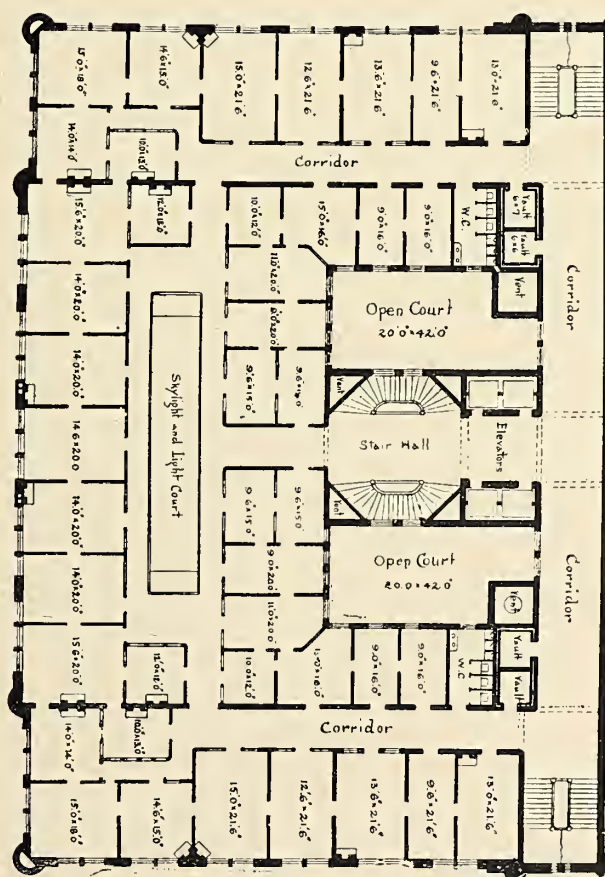
COMPETITIVE DESIGN FOR KANSAS CITY EXCHANGE BUILDING,

SUBMITTED BY "K," JAMES W. McLAUGHLIN, ARCHITECT, CINCINNATI.

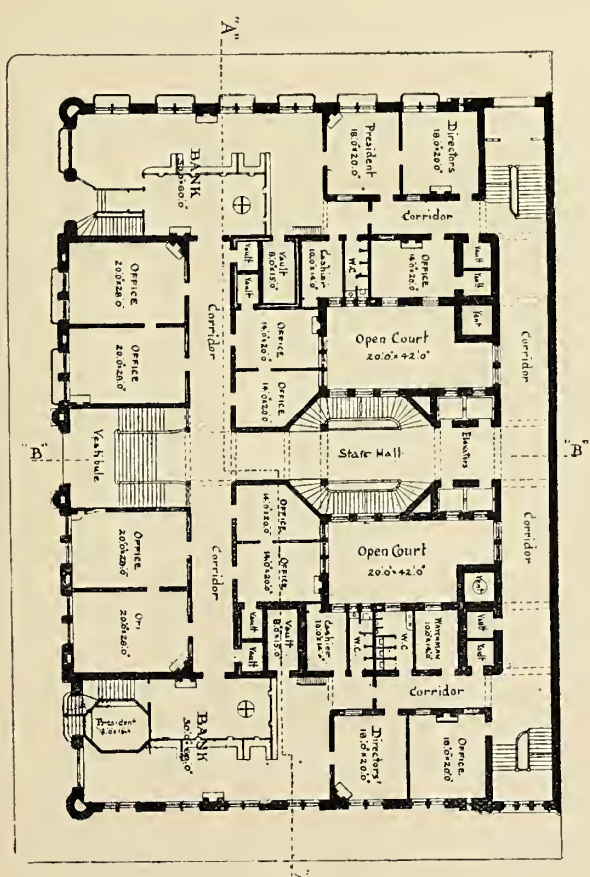
CENTRAL STREET ELEVATION



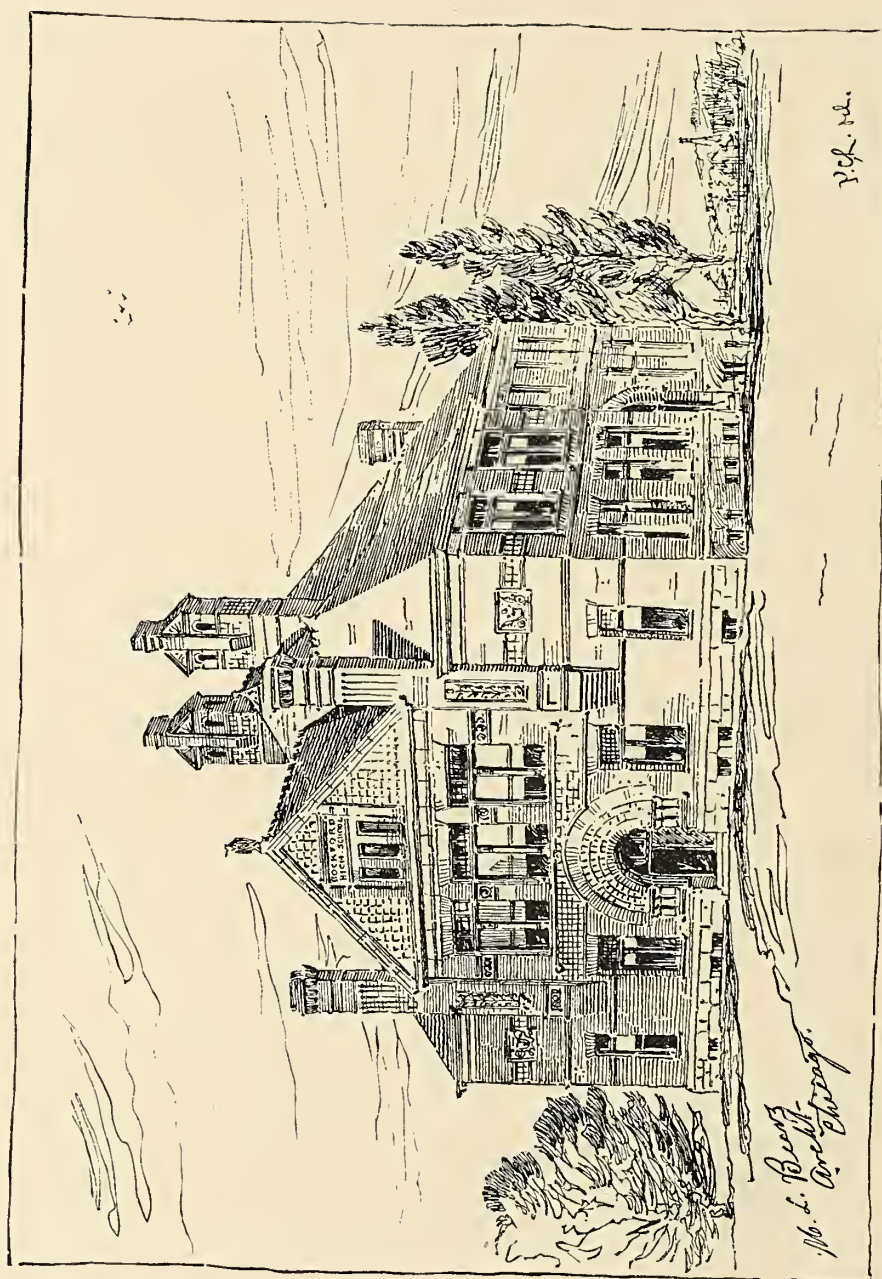
Principal Story



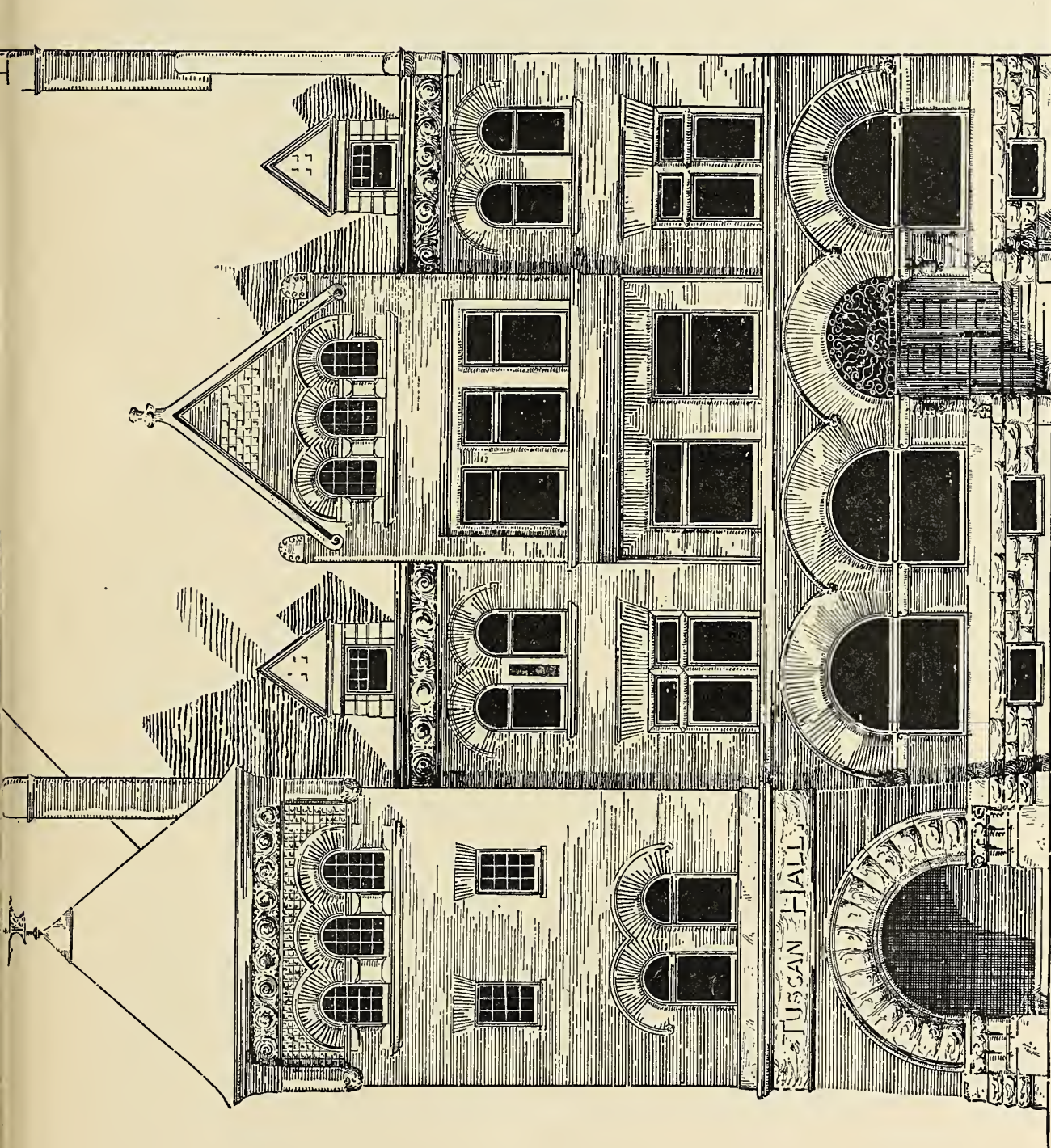
FIFTH STORY



FIRST STORY

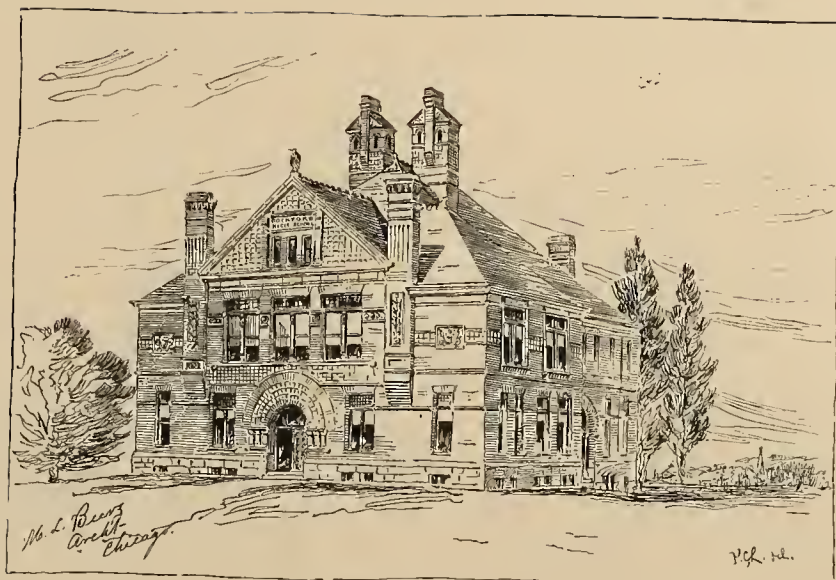


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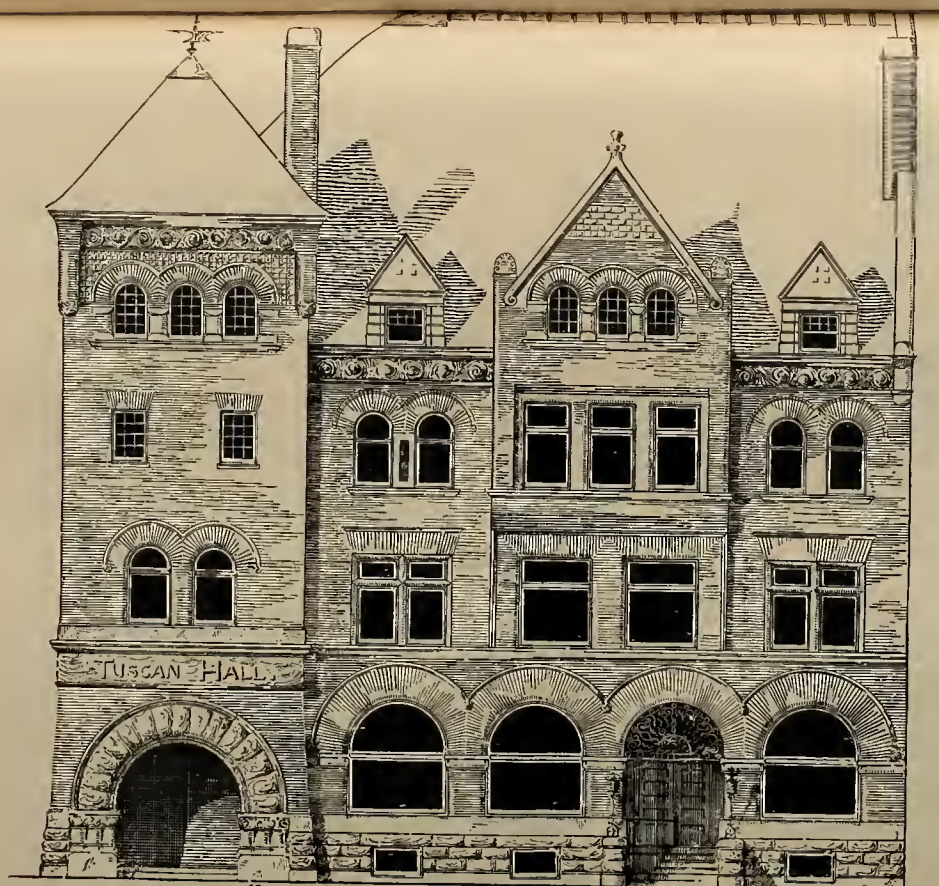


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VOL. VIII.—No. 6.

CHICAGO, OCTOBER, 1886.

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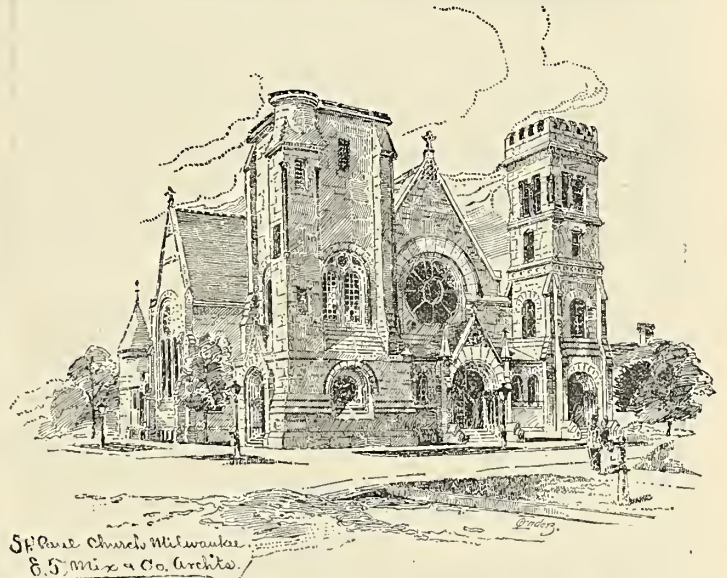
ASSOCIATION AND BUILDING NEWS.

PUBLISHED BY

THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

PREPARATIONS for the convention of the Western Association, at Chicago, are being actively pushed forward, not only in Chicago, but throughout the country, several of the state associations having already commenced preparations to attend in a body. The secretary of the Western Association, as soon as notified of the expected attendance, will secure reduced rates upon all railroads, and in every way endeavor to provide for the comfort of those attending. He should, therefore, be immediately informed of such intention. Papers will be read by a number of the most prominent architects in the association. Though the subjects have not been announced, W. W. Boyington will probably discourse upon hotels; L. H. Sullivan, professional ethics or design; D. H. Burnham, tall office buildings; E. H. Ketcham, insane asylums; Prof. N. Clifford Ricker, architectural education; Isaac Hodgson, dwellings; while Dr. Oscar DeWolf, the city health commissioner, and S. J. Artingstall, the city engineer, upon subjects identical with their line of work. The several committees are preparing reports on the year's work. That of those appointed to form state associations will be not only encouraging, but interesting, much good work having been accomplished. Other committees, on statutory revision, on collection of statistics, on competitions, on the bill governing the office of supervising architect, on uniform contracts and specifications, are all expected to present interesting reports. While a great deal of pleasure will be derived from attendance upon the convention and visiting points of interest in the city, this will be essentially a business meeting, and each architect will be expected to take an active part in its transaction.



The Indiana State Association of Architects.

THE architects of the state met at Indianapolis on the 21st instant, pursuant to a call issued by J. F. Alexander of La Fayette, the Committee on State Organization appointed by the Western Association. The architects gathered at the Grand Hotel, and during their stay were most excellently entertained at that hostelry.

The meeting was called to order by R. C. McLean, of THE INLAND ARCHITECT AND BUILDER, and on motion, Mr. Alexander was chosen chairman, and Mr. McLean secretary of the convention.

The following names represent the complete roll of membership at the close of the meeting, each member having qualified and paid his annual dues in advance to the treasurer:

E. H. Ketcham, Indianapolis,	J. A. Hasecoeter, Richmond,
G. W. Bunting, Indianapolis,	J. W. McClain, Terre Haute,
D. A. Bohlen, Indianapolis,	J. F. Wing, Ft. Wayne,
O. D. Bohlen, Indianapolis,	M. S. Mahurin, Ft. Wayne,
Chas. G. Mueller, Indianapolis,	J. F. Alexander, La Fayette,
Louis H. Gibson, Indianapolis,	M. J. Reid, Evansville,
J. H. Stem, Indianapolis,	J. W. Reid, Evansville,
J. W. Gaddis, Vincennes,	J. W. Hammond, Frankfort,
W. H. Floyd, Terre Haute.	

The following names were presented by members, and were passed upon by the Committee on Credentials:

W. S. Kauffman, Richmond,	Jacob Lizius, Indianapolis,
— Schram, Indianapolis,	W. S. Moore, Indianapolis,
A. Sherrer, Indianapolis,	Jos. Curzon, Indianapolis,
R. P. Daggett, Indianapolis.	

A. J. Willoughby, a contractor from La Fayette, was present by special invitation.

Mr. Alexander, upon taking the chair, addressed the assembly as follows:

At the last annual meeting of the Western Architectural Association, held at St. Louis, a resolution was passed to form architectural associations in the various Western

and Northern States, and also that one architect from each state represented at the convention be appointed a committee to form state associations. The honor of representing the great State of Indiana on this important committee fell to my lot; and in compliance with that resolution, you have all been cordially invited to meet here at this time. By your presence here I am led to assume that you regard a step in the direction of mutual protection as being of benefit to the members of our profession.

I am much gratified to see so many architects here. Your presence justifies the thought that you are all interested in seeing the name of Indiana placed on the successful list with Illinois, Minnesota, Iowa, Missouri, Wisconsin, Texas, Nebraska and Ohio, all of which states have successfully organized state architectural associations whose members are working harmoniously under their influence. Their benefits are not confined alone to their members, but the public have been given a more efficient and satisfactory service, which fact the generous public have fully conceded.

Did it ever occur to you, gentlemen, that it was asking too much of a confiding public to counsel and trust men of a profession who seem to have so little confidence in and regard for each other as the architects of Indiana have maintained for themselves in the past.

Is it not time that the architects of Indiana should show the public that they are progressive men, and are anxious to increase their efficiency by following the example of Illinois and Minnesota? I am gratified to state that the best men of our profession are the most zealous workers. I have received more encouragement from such men as Mr. Adler, Mr. Burnham, Mr. Bloor, Mr. Treat, Mr. Jenney, Mr. Illsley, and others of their standing than from any other class.

No one can help us as much as we can help ourselves. If you coöperate earnestly and adopt a wise and judicious policy, and place zealous and efficient men in office, you need have no fears as to success. The benefits to be obtained by organization are many and are of vital interest to us all. The much needed statutory laws can only be secured by united action on our part; and I trust that you have come here with a fixed determination to make the Architectural Association of Indiana equal to the best, and thereby reflect credit upon yourselves and the great State of Indiana.

J. H. Stem: I move, Mr. Chairman, that we proceed to organize a state association of Indiana architects, under the rules governing the Western Association. Carried.

Louis H. Gibson: I move that the chairman appoint a committee on credentials.

The motion was carried, and the chairman appointed as members of the committee on credentials, Messrs. D. A. Bohlen, M. S. Mahurin and E. H. Ketcham.

Mr. Gibson: I move that the chairman appoint a committee on constitution and by-laws.

The motion was carried, and the chairman appointed B. Vonnegut, J. H. Stem and J. F. Wing as members of that committee.

Mr. Ketcham: Mr. Chairman, the Committee on Credentials have come to the conclusion that as there is no constitution or by-laws governing this organization as yet, that it is impossible for them to say who shall and who shall not be members of this organization. We recommend, however, that all members present enter upon the organization of this association and have the rights of the floor and a voice in all motions that may come before it.

On motion the report of the committee was accepted.

Mr. Vonnegut: Mr. Chairman, the Committee on Constitution and By-Laws is ready to report.

On motion the report of the committee was read section by section and adopted as the constitution and by-laws governing this organization, being as follows:

CONSTITUTION.

NAME.

SECTION 1. The name of this association shall be the Indiana State Association of Architects.

OBJECTS.

SEC. 2. The objects of the association are: To unite in fellowship the architects of the State of Indiana, to combine their efforts so as to promote the artistic, scientific and practical efficiency of the profession, and to cultivate and encourage the study of kindred arts.

MEMBERS.

SEC. 3. This association shall consist of active and honorary members.

QUALIFICATIONS.

SEC. 4. Any architect practicing his profession in the State of Indiana may become a member of this association.

[The status of an architect is hereby defined as follows, to-wit: An architect is a professional person, whose sole ostensible occupation consists in supplying data preliminary to the material construction and completion of buildings; in exercising administrative control over the operations of contractors supplying material and labor incident to the construction and completion of buildings, and officiating as custodian and arbitrator of contracts, stipulating terms of obligations and fulfillment between proprietor and contractor.]

OFFICERS.

SEC. 5. The officers of this association shall be: a president, a secretary, a treasurer, two vice-presidents and an executive committee.

DUTIES OF OFFICERS.

SEC. 6. It shall be the duty of the president to preside at all meetings of the association, or, in his absence, this duty shall devolve on the senior vice-president.

It shall be the duty of the secretary to take minutes of all meetings of the association, and to conduct all of its correspondence, subject to the control of the executive committee.

It shall be the duty of the treasurer to collect all funds of the association, and disburse the same on the order of the secretary, when countersigned by the chairman of the executive committee.

The executive committee shall consist of four members and the president. It shall require three members of this committee to constitute a quorum.

It shall be their duty to exercise control over the property and general interests of the association; to receive nominations for membership and act upon the same; to consider complaints and expel members of the association for cause; to act as a committee of arbitration on all questions submitted to it by active members of the association, and generally to have control of its welfare and interests.

All calls for extra meetings shall be issued by this committee.

This committee shall report to the association at each regular meeting of the association.

All appeals from the action of the executive committee shall be to the Board of Directors of the Western Association of Architects.

AMENDMENTS.

SEC. 7. This constitution may be amended by a two-thirds vote of the active members present at any meeting of the association; provided, that a notice of such pro-

posed change shall have been mailed to each active member, by the secretary, on the order of the executive committee, twenty days before the date of said meeting.

BY-LAWS.

MEETINGS.

ARTICLE I. There shall be four meetings during each year, occurring on the fourth Wednesday in January, April, July and October, in such place as shall be designated by a majority vote of members present at the previous meeting, and due notice shall be given each member of the association of the time and place of meeting.

RULES OF ORDER.

ARTICLE II. The meetings of this association shall be conducted according to Robert's Rules of Order.

APPLICATIONS FOR MEMBERSHIP.

ARTICLE III. Any person desiring to become a member of the association shall send his application in writing to the chairman of the Executive Committee; this application to be indorsed by two active members of the association who are personally acquainted with the applicant.

ELECTION OF MEMBERS.

ARTICLE IV. Upon receiving an application for membership, the Executive Committee shall investigate the standing of the applicant, and shall, by ballot, admit or refuse him. Each member shall receive a certificate of membership signed by the president and secretary of the association. All discussion of applicants to be considered confidential.

DUES.

ARTICLE V. All active members of the association shall pay an annual due of five dollars, the same to be paid at or prior to the annual meeting in October, and no person shall be entitled to vote whose dues remain unpaid.

QUORUM.

ARTICLE VI. Nine active members shall constitute a quorum for the transaction of business.

ELECTION OF OFFICERS.

ARTICLE VII. All officers of the association shall be elected at the annual meeting of the association in October. They shall be elected by a majority ballot vote of the members present.

PAPERS AND RECORDS.

ARTICLE VIII. All papers and other records, not considered by the Executive Committee confidential, shall be at all times open to the inspection of the active members of the association.

AMENDMENTS OF BY-LAWS.

ARTICLE IX. The by-laws of this association may be amended by a two-thirds vote of the active members present at any meeting, notice having been given as in the case of proposed amendments to constitution.

Mr. Mahurin: Mr. Chairman, I move that we proceed to the election of officers. The motion was carried.

The following officers were elected:

President, J. F. Alexander, La Fayette, Ind.; secretary, E. H. Ketcham, Indianapolis, Ind.; treasurer, Merritt Reid, Evansville, Ind.; first vice-president, George W. Bunting, Indianapolis; second vice-president, J. A. Hasecoeter, Richmond, Ind.

On motion, the meeting adjourned to meet at the Grand Hotel at 7:30 P.M.

SECOND SESSION.

The meeting convened at the Grand Hotel at eight o'clock P.M., and was called to order by the president.

The secretary announced the following as the members of the Executive Committee:

O. D. Bohlen, Indianapolis; A. Vonnegut, Indianapolis; J. H. Stem, Indianapolis; J. F. Wing, Ft. Wayne.

Mr. Gibson: I move that the president be instructed to appoint a committee on statutory revision.

The motion was carried, and the following were appointed members of that committee:

George W. Bunting, Indianapolis; D. A. Bohlen, Indianapolis; M. S. Mahurin, Ft. Wayne.

Mr. Bunting: I move that the president be instructed to appoint a committee to raise the professional standard in the State of Indiana.

The motion was carried, and E. H. Ketcham, L. H. Gibson and C. G. Mueller were appointed as that committee.

Mr. Reid: I move that the chair appoint a committee on competitions.

The motion was carried, and D. A. Bohlen, L. H. Gibson and J. W. McClain, of Terre Haute, were appointed as that committee.

Mr. Ketcham: Mr. Chairman, in behalf of your Committee on Credentials, I recommend that the name of each person present be presented for membership and that we ballot thereon, and that such member receiving three negative or blank votes, shall be excluded from membership. The committee think, perhaps, there are some persons better acquainted than they are, and we think if we put this to a vote, we will come to a more satisfactory conclusion than by any other report that the committee may see fit to offer.

On motion the report was received and referred to the Executive Committee.

Mr. Ketcham: Mr. Chairman, I would like to offer this resolution:

Resolved, That the Indiana State Association of Architects extend the Builders' Exchange of Indianapolis our heartiest thanks for the compliment conferred by extending to us the use of their hall.

Mr. Stem: I move that the resolution be adopted, and that the secretary be instructed to send a copy of the resolution to the president of the Builders' Exchange. The motion was carried.

Mr. Ketcham: Mr. Chairman, I move that, as THE INLAND ARCHITECT is the official journal for the Western Association and other state associations, that it may be made the official journal of this association. I would like to state that the object I have in making this motion is that THE INLAND ARCHITECT is the official journal of most of the associations of architects in the country as well as of the Western Association, and I think

it proper that we have one medium through which we can keep posted, and on which we can rely to record the action of our own association and also of other state associations.

The motion was seconded by Merritt Reid, and carried.

Mr. McLean: Mr. Chairman, if you will pardon me, I would say, as the representative of the paper which has just been honored by being made the official journal of this association, that the purpose of an official journal is this. You simply have one journal that you know will publish your proceedings. Any journal may make as full a report as it wishes; there is no monopoly or anything of that kind. Being a newspaper man, I have always advocated giving as large a publicity as possible, and believe in and practice treating reporters with the utmost courtesy, and try to see that they get the fullest reports possible. I thank you for your courtesy in honoring THE INLAND ARCHITECT.

Mr. Ketcham: Mr. Chairman, at a meeting of the architects of this city, held yesterday at my office, it was determined to do all in our power to entertain the visiting architects to the best of our ability, and tomorrow, at a time which will be designated by the Committee on Arrangements, the visiting architects will be taken over the city to the different points of interest.

Mr. Stem: Mr. Chairman, as one of the Committee on Arrangements, I will say that we have provided carriages for the use of the visitors.

The President: As one of the visiting members, I will thank you for them for the kind invitation, which I know will be accepted by them all with pleasure.

Mr. Ketcham: Mr. Chairman, I move that a committee on contracts be appointed to report at our next meeting.

The motion was carried, and E. H. Ketcham, A. D. Bohlen and J. H. Stem were appointed as that committee.

The President: I think this is a very important matter. I do not suppose that two of us use the same form of contract.

Mr. Ketcham: I would like to say one thing with reference to contracts in particular and some other points in general. Our duty as architects consists, first, in the preparation of drawings, then writing specifications, then the contract and then supervision. As drawings we should have them clear and concise, illustrating every feature of the building, so that there shall be no dispute whatever, or in case of dispute, so clearly expressed that it gives the architect the reins entirely in his own hands. When that has been done the specification and contract amount to very little; but it is necessary to have some form of contract. A bond, it is well known, in this state is perfectly worthless. Whether he be a bondsman for a county treasurer, or for a contractor the courts have always taken the ground that the bondsmen have undertaken to tie themselves up without receiving any compensation whatever therefor, and for that reason they should have the benefit of all doubts. In order that a contractor may be held it is necessary that these things should be pretty clear and concise. The only advantage I see in a bondsman is where the contractor persists in doing his work contrary to that which is specified, and a note to the bondsman that the contractor is not complying with the terms of the contract and that the bondsman will be required to carry that out unless the contractor does, always produces the desired effect. I would suggest first, clear concise drawings; second, close specifications, that they may illustrate the unseen parts of the work, and third, a contract that shall be equitable between the party of the first part and the party of the second part; and fourth, a bond. Under those conditions we can hold contractors to their work, and we can make bondsmen responsible for the work they undertake to do.

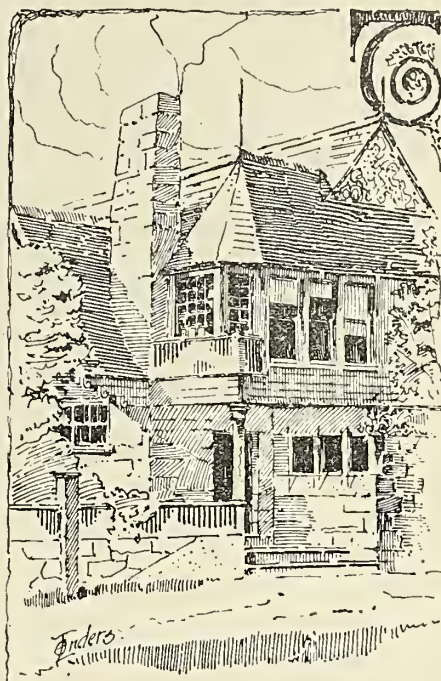
I would like to refer by way of illustration to the drawings now on exhibition in this city, prepared by a Pittsburgh architect, for the purpose of building what is supposed to be from three-fourths of a million to a million dollars' union depot. The drawings are less than thirty sheets. The sheets are less than 30 inches square, except the block plan, which is some 1,000 feet long. I have not seen the specifications, but I do not believe it possible for me to take those drawings and write a set of specifications, unless it be as elaborate as Webster's Dictionary, to detail the manner in which that work is to be done. I see marked on the drawings a column fourteen inches in diameter. There is nothing except a small scale drawing to illustrate the ornamentation on that column; there is nothing to represent the thickness of the iron, and as I understand there is nothing to illustrate the weight of that column. I think it is the duty of the architect to draw that column in such a way that the contractor can figure exactly the weight of the metal, the elaborateness of detail of its construction and the ornamentation. I cannot see how a contractor with that work will not have trouble with the architect from beginning to end; I cannot see how the work can be carried on without the assistance of the courts. I am afraid if I were called upon as a witness, I should have to take the side of the contractor. It is supposed the contractor knows the weight that that column is to carry, knows the strains transverse and lateral that come upon that column, and shall make the necessary calculations.

Mr. Gibson: I saw these drawings and specifications. The drawings are very nice. I read the specifications through, and specially in the matter of steam heating they were very complete. As to the stone and brickwork, they are quite elaborate—but the iron contractor is required to submit drawings and prices, etc., himself.

On motion, the meeting adjourned to the next quarterly meeting, which will be held on the fourth Wednesday in January next.

ENCAUSTIC, ornamental and plain tile are every day becoming more perfect in make, coloring and modeling. A recent visit to the Indianapolis Encaustic Tile Works showed a marked improvement in these particulars during the past year, and also in the volume of material produced. The output covers all descriptions of tile, and the modeling in many new pieces equals the best work of the older establishments of England. That the West has produced art works of so high a standard should be a matter of congratulation among both architects and the public, and should encourage this concern to still further elevate the artistic standard of their ceramic productions.

Annual Meeting of the Illinois State Association of Architects.



HE adjourned annual meeting of the association was held on the 16th inst., President D. H. Burnham in the chair.

Minutes of previous meeting having been read and approved, the president called on the committee on the revision of sanitary laws for their report.

Mr. Baumann: We are not quite ready to make our report, but shall be at the next meeting.

The President: The chair would suggest the urgency of this work, as the legislature will be in session shortly.

The chairman of the Committee on Party Walls not being present, is there one of the other members present who will make a report on what has been done?

L. H. Sullivan, sec-

retary: I have received communications from Messrs. Boyington and Randolph.

The President: Please read them.

CHICAGO, August 31, 1886.

To the Illinois State Association of Architects:

GENTLEMEN,—The subject of party walls having at a former meeting been referred to myself, Louis H. Sullivan and S. M. Randolph to consider and report; and as several meetings have passed without a report, and as it seems quite out of the question to set a time that suits all parties of the committee to meet and consider the subject, I most respectfully, and with all due respect to the other members of the committee, beg leave to submit the following report of my views on the subject referred to us, hoping that the points set forth may serve as a basis for discussion by the association and the adoption of some definite rule of action on this very important subject. I hand you this, as I shall not be able to be with you at your next meeting, as I have to be in Springfield on that day:

PARTY WALLS.

1. Where party wall written agreements are made between parties, the tenor of the instrument must be the guide in settlement between parties. All party walls should be paid for before they are used by the second party.
2. Where one party builds a party wall in advance of the other party, the proportion of the architect's commission for building the party wall should form a part of the cost of said party wall, to be paid for by the second party.
3. When the second party occupies said wall, the architect should not charge a commission on the value of said wall, unless he has to replan said wall and build flues into it, and gives his time to computing the value of said wall, in which case he should charge commission on the full value of one-half the party wall, as a part of his services as architect.
4. Where the party first building a party wall does at the second party's request build ledges and flues in said wall for the future use of the second party, all such additions to the regular party wall should be paid for when they are built.
5. When the second party occupies the wall, he should not be obligated to pay for only as much surface as he occupies, except it be by written agreement that he should pay for all the wall when he uses any part thereof.
6. In case of a written agreement for a party wall of certain dimensions for thickness, lengths and heights, neither party should be allowed to build higher or longer, unless both parties agree to the same.
7. In building flues, chases, or inserting columns for the especial benefit of either party, they should not extend beyond the center line of the wall for either party, except by written agreement beforehand, and, as a rule, no flue should go nearer than within four inches of the party line. In setting joists in a party wall, they should not enter more than four inches. Girders may rest on the wall to the center line when required for a bearing surface.

All of which is respectfully submitted.

W. W. BOYINGTON,
One of the Committee.
CHICAGO, September 16, 1886.

To the Illinois Association of Architects:

GENTLEMEN,—The accompanying report as drawn up by Mr. Boyington has just now reached me. My own views are quite different and as there will be no time to discuss the matter in committee I beg leave to submit the following:

1. There can be no party wall without an agreement, and the same should be in proper form for recording, a blank form made by the Chicago Legal News Co., and believed to be in general use is herewith submitted.
2. The architect's commission should not be a factor in estimating the value of excavation and masonry; he should be paid by the party who employs him to design a building and superintend its construction; his fee should be a commission upon its entire cost.

3. The words "cost price," which occur in the twenty-eighth line on second page of the accompanying blank form should be stricken out, and the words "actual value" inserted in their place.

All of which is respectfully submitted.

S. M. RANDOLPH,
One of the Committee.

Mr. Baumann: I would move that this report be printed and kept for consideration at another meeting. Carried.

The President: We will now hear the report of the committee having in charge the entertainment of the Western Association.

Mr. Treat, the chairman of that committee, said he had no report to make other than that the matter was progressing in a satisfactory manner, and that he had conferred with the representative of the Western Association as to proper arrangements for their entertainment.

The President: Before going into the final business of the year, which will be the reports of officers and the election of new ones, I would like to suggest that the Committees on sanitary law and on party walls be continued for another year, and if there is no objection, that will be the understanding.

There is one thing more that should be done, and the chair would be glad of a motion to that purpose: there should now be appointed a

committee upon statutory revision. The matter was brought up during the year and was discussed, but no action was then taken on account of the legislature not being in session. The legislature meet in January, and there is now none too much time to get ready the preliminaries that are necessary.

Mr. Adler: I move that a committee of three be appointed, of which the chairman of this meeting be one, to take charge of such proposed revision of the old statutes and enactment of new ones as may be deemed advisable in the interests of the profession, and also that the said committee be empowered to expend such moneys for printing and other legitimate purposes, as may be necessary to facilitate the work for which the committee is created.

The President: The chair would ask that the motion be worded so that in case of the failure or inability of any member to act another might fill the position. It is understood of course, gentlemen, that we are somewhat pledged to the Western Association to forward their state law, which was formed by them last year, and that will probably be the chief work of this committee. Therefore it is necessary to make a record to show the Western Association that we have not forgotten the matter, and that as soon as the time comes to do anything it will be done.

Mr. Adler's motion, with the suggestion of the president, was adopted.

The President: The next business in order will be the reports from the standing committees and officers—the Executive Committee first, though it will be unnecessary to make any report in detail from it. Is the treasurer ready to report?

Treasurer S. M. Randolph reported: Total receipts \$1,786.64; expenditures, \$728.92; leaving a balance of \$1,057.72 in the treasury.

The President: In justice to Mr. Randolph, the chair will appoint Mr. Cleveland as auditor to go over the accounts.

The President, D. H. Burnham, made the following remarks:

GENTLEMEN,—The year just closed has been a successful one to us as an organization. The amount of work done, and the general interest shown, should encourage us to further effort, not only in striving to increase the influence of the association, but the good feeling and professional esprit of the members.

In looking over the minutes of our meetings, I find that among others, the following subjects have engaged your attention:

For the profession at large we have adopted a schedule of charges identical with that already in use by the American Institute of Architects.

The state law, recommended by the Western Association, has been discussed and would have been acted upon if the state legislature had been in session.

A code on which to conduct competitions has been mentioned and discussed, but no definite action has been taken upon it, although I don't doubt the general sentiment would indorse such action.

At one of our meetings the question, "What is Superintendence?" was discussed in its various aspects, and a resolution passed defining it.

Another meeting was devoted to the relations existing between architects and clients, and between architects and contractors, at which eminent lawyers were present who answered all legal queries arising, and the result has been the clearing up of many questions of professional ethics and rights.

One meeting was devoted to Chicago soil and foundations at which experts outside of our own association were present, and the discussions settled many doubtful questions.

Similar subjects were discussed in a more informal manner among ourselves at other meetings.

Two meetings were devoted to the proposition to present a sanitary bill in the next legislature. After a long discussion, and some very able papers, the principal one of which was read by Dr. DeWolf, a committee of three was formed which, as I understand, is to continue until work is done, or until the association shall relieve it.

One meeting was devoted to party walls, out of which much good has come.

An Entertainment Committee was appointed for the purpose of making arrangements to receive the Western Association in November next, and especially to make their visit here pleasant to themselves and to us.

The fund turned over to us by the gentlemen who subscribed to the banquet given in this city two years ago has never been touched, and upon a suggestion in one of our meetings has been lying in the treasury for use in any way this association may see fit.

It is a matter of congratulation that the treasury is in so good a condition, and so good a balance left.

We may also congratulate ourselves on the fact that the membership has not materially diminished, and that the interest has been so thoroughly maintained as to make this body respected and felt throughout the community in which its members have the honor to practice the profession of architecture.

In retiring from the presidency, I wish to thank you all for your uniform courtesy toward me, and on my part I can perhaps say nothing you would more care to hear than that I have noticed a growing spirit of not only politeness and ordinary courtesy among you, but it has seemed to me also a strong conscientious desire on the part of one and all to forbear from harsh criticism, to praise where praise is due, and to extend to all that warmth of sentiment which has made our monthly meetings so pleasant and fruitful.

So, gentlemen, that which we all need has been found here at our reunions. I mean encouragement, praise and discriminating censure from skilled critics capable of judging, and in this way the chief ends of the association have been subserved, namely, to help the individual and improve the work of the entire state.

The Executive Committee reported as new members Architects C. P. Thomas and J. J. Donnellan, of Chicago, and the resignations of W. L. Ross, of La Harpe, removed to Newton, Kansas, and Oscar Cobb, of Chicago.

The following honorary members had been admitted during the year: Thos. U. Walter, President American Institute; C. E. Illsley, Past-President Western Association; Isaac Hodgson, President Architectural Association of Minnesota; A. W. Van Brunt, President Missouri State Association; W. F. Hackney, President Architectural Association of Iowa; DeWitt C. Cregier, Commissioner Public Works, Chicago; Alexander Kirkland, Superintendent of Public Buildings, Chicago; G. P. Brown, Editor *Sanitary News*, Chicago; Dr. Oscar DeWolf, Health Commissioner, Chicago; S. J. Artingstall, City Engineer; J. M. Van Osdel, Sr., Architect, Chicago.

The President: The next thing in order is the election of officers for the ensuing year.

Mr. Adler: I have been awaiting the statement from the chair that nominations were in order, and will now nominate Mr. D. H. Burnham for president for the ensuing year, on the following grounds: The president of an association like this should be one who is capable and willing to serve with intelligence, fidelity and zeal, and one whose standing in the community as an architect, as a man of business and of honor is such that his election will confer a credit upon the association which has honored itself by electing him to its presidency. I think we have had all of this in the person of Mr. D. H. Burnham, and it is on this account that I place

him in nomination, and I hope that this nomination will be seconded and his election be made unanimous.

Mr. Baumann: I second the motion.

The President: I feel very grateful, indeed, for the kindly sentiments expressed. I feel that I have not done my duty this last year as I might have done it. But poor as my service has been for the past year, I would even be very glad to continue if it were not for my own feeling that I should give way to another. Again, it is going to be impossible for me to do any work that will take my time from my own affairs,—not only professional, but private. I know they are going to be in such a condition that I do not want to have any divided interest, and I would therefore like very much to be excused. In fact, I am compelled to say that, on account of my own circumstances, and on account of my own feeling toward the Association, that it will be impossible for me to serve. The chair will be glad to listen to nominations for the presidency.

Mr. Adler: I move that a ballot be taken by tellers. Motion carried.

The President: The chair will appoint Messrs. Root, Gay and Lautrup as tellers.

The officers elected for the ensuing year are as follows: Dankmar Adler, president; S. A. Treat, first vice-president; N. S. Patton, second vice-president; C. L. Stiles, secretary and ex-officio member of Executive Committee; S. M. Randolph, treasurer.

Executive Committee: S. M. Palmer, L. D. Cleveland, Wm. Holabird, John W. Root, C. L. Stiles, (ex-officio) and the president of the association, chairman.

Mr. Adler: It would be well if the association would authorize the Executive Committee to take such action as may be necessary on behalf of the association to supplement or complete any arrangements that may be made by the committee on arrangements for the coming convention of the Western Association. I therefore move that such authority be given the Executive Board. Carried.

Mr. Boyington: For the future action and consideration of this society I would like to mention the name of Mr. Edwin Lee Brown, who has expressed himself as desirous of becoming identified with the state association, as an honorary member.

The President: That comes before the Executive Board I believe, and if Mr. Boyington will send his nomination in to them they will pass upon it.

Mr. Randolph: Mr. John M. Van Osdel, Jr., has expressed a willingness also to become a member of this association.

The President: The growth of the association has undoubtedly got to come from individual effort. We have stood for two years where we started. That is pretty good proof that the association won't grow without such effort on the part of individual members. If any gentleman here has a friend who desires to come in, it would be to the benefit of the association to know his name.

Mr. Root: As secretary of the Western Association, I have taken the liberty of forwarding a circular letter to all of the architects of the country, the substance of which was to call their attention to the existence of the Western Association, of its purposes, and the information that the convention is shortly to be held, and expressing the sense of the association that as a body we would be pleased to have them in Chicago at the time of the convention, indicating our willingness to have them join the association. Then a similar circular was issued to all the members of the American Institution, implying a like invitation.

Meeting adjourned.

Association Notes.

THE BUFFALO SOCIETY OF ARCHITECTS.

At an adjourned meeting of the society, held on the 19th instant, the following list of officers were elected for the ensuing year: president, Cyrus K. Porter; 1st vice-president, Geo. J. Metzger; 2d vice-president, Louise Bethune; secretary, W. W. Carlin; treasurer, R. W. Bethune.

Paper to be read at next meeting, November 2, "When and By Whom Was the Arch Invented?" by J. R. Ponter. Subject for discussion, "Brick."

CHICAGO ARCHITECTURAL SKETCH CLUB.

About thirty members were present at the last meeting, and listened to the reading of an excellent paper upon "Hardwoods and Hardwood Finish," by H. V. Wagner. The paper was freely discussed by the members.

The club is actively engaged in preparation for the annual meeting, November 8, which will be followed by a special meeting on the 15th, which will take the form of a reception. The features of the evening will be the discussion of a supper, the reports of officers for the past year and the installation of the new officers. An earnest effort is being made to make a creditable exhibit of drawings by the club members, which will be complete on that evening and will remain open for the inspection of architects attending the convention and who will be especially invited to visit the club rooms for this purpose. Drawings of every description, except copies, will be admitted to this exhibit, and the prospect is that the greatest success will attend the efforts of the club to make this exhibit valuable and complete. A full attendance at the meeting, November 8, is earnestly requested.

IN response to the urgent demand of numerous patrons for an opportunity to visit the Pacific coast during the coming winter, the "Great Rock Island Route" announces that the first of a series of grand first-class excursions to San Francisco and Los Angeles will leave Chicago, October 26 inst., the rate per round trip having been made extremely low. Tickets (with stop-over privileges) good for going passage thirty days west of Missouri river, and good for return six months after date of issue, with choice of routes either via Council Bluffs or Kansas City. For Pullman sleeping car accommodations, or detailed information relating to this or subsequent excursions, address E. A. Holbrook, General Ticket and Passenger Agent C. R. I. & P. R'y, Chicago, Ill.

THE INLAND ARCHITECT AND BUILDER.

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NOVEMBER, 1886.

THE INLAND ARCHITECT AND BUILDER

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(A NATIONAL ORGANIZATION.)

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WESTERN ASSOCIATION OF ARCHITECTS.

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Committee on Discipline—The Board of Directors of the Western Association.

Committee on Raising the Standard of Professional Requirements for Membership—W. W. Boyington, W. L. B. Jenney and D. Adler, all of Chicago.

Committee on Uniform Contracts and Specifications—The executive boards of the several state associations to report at the next session of the Western Association.

Committee to take charge of the Bill Governing the Office of Supervising Architect of the United States—D. Adler, Chicago; D. H. Burnham, Chicago; J. F. Alexander, La Fayette, Ind.

Committee on Procuring Architectural Drawings and Photographs for Exhibition at the next Convention of the Western Association—The members of the Committee on Formation of State Associations.

Committee on Collection of Statistics on Competitions—C. E. Illsley, St. Louis, Mo.; Sidney Smith, Omaha, Neb.; E. H. Taylor, Des Moines, Iowa; G. W. Rapp, Cincinnati, Ohio; J. F. Alexander, La Fayette, Ind.

Committee to Represent the Western Association at the next Annual Convention of the American Institute—W. L. B. Jenney, Chicago, Ill.; J. F. Alexander, La Fayette, Ind.; W. F. Hackney, Des Moines, Iowa; Sidney Smith, Omaha, Neb.; J. G. Haskell, Topeka, Kas.

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ARCHITECTS attending the Western Association Convention on the 17th, 18th and 19th of November, will, as far as possible, locate at the Grand Pacific Hotel. Reduced rates have been secured. For other general information see our October regular and intermediate numbers.

OUR verbatim report of the coming convention of the Western Association of Architects, will be submitted to the directors of the association for revision before publication, and the number of THE INLAND ARCHITECT AND BUILDER containing this official report will be sent to every architect in the United States, and to such others as the Board of Directors may instruct. The entire expenses of the report and of such publication, will be borne by us. These benefits to the Western Association are in fulfillment by THE INLAND ARCHITECT AND BUILDER of its duties as official journal. The relation of this journal to the Western Association and state associations does not prevent other journals acceptable to these associations from taking stenographical reports of all meetings, and publishing them. As has been our custom heretofore, we shall be glad to aid publications to obtain full reports at all times.

THE following preliminary notice to members has been issued by the secretary of the American Institute of Architects, calling a meeting of that body at New York City on December 1, 2, and 3:

AMERICAN INSTITUTE OF ARCHITECTS,
SECRETARY'S OFFICE—10 CATHERINE STREET,
NEWPORT, R. I., October 24, 1886.

SIR,—At a special meeting of the Board of Trustees, A. I. A., held in the city of New York on the 13th day of October, 1886, it was voted: That the twentieth annual convention of the American Institute of Architects be held in the city of New York on the 1st, 2d and 3d days of December, 1886. The secretary was further instructed to send to each member of the Institute, at the earliest practicable date, a preliminary notice to that effect.

At the same meeting of the trustees, Messrs. E. T. Littell, A. J. Bloor and O. P. Hatfield were appointed a committee on arrangements.

A detailed notice of arrangements, and the programme for the convention, will be sent out later; but it is deemed best by the committee, in view of the limited time at its disposal, to request all those who desire to attend the meetings of the convention to notify the secretary of their intention to be present.

The committee is now perfecting its arrangements and desire to have the twentieth convention of the Institute a success in all particulars. No efforts will be spared by the members of the committee to render its sessions of profit and interest to the profession.

The committee further desires to obtain papers on subjects of interest to architects; also suggestions of subjects for discussion; with drawings, sketches and models for exhibition. It would be advantageous if members of the Institute would attend the convention prepared to present topics for discussion; thus opening the way for an interesting and profitable interchange of ideas on professional practice in general, with the many interests, scientific, artistic and constructive which surround and elevate it.

All communications should be sent to the secretary of the A. I. A. as early as possible.

It is also requested that all reports from officers, chapters and standing committees be forwarded to the secretary before the meeting of the convention, thus avoiding delays and irregularities in the proceedings.

Respectfully,

E. T. LITTELL,
A. J. BLOOR,
O. P. HATFIELD, } *Committee on Arrangements.*
E. T. LITTELL, *Chairman.*

GEORGE C. MASON, JR., *Secretary.*

On the eve of so great a gathering of architects as will assemble in Chicago upon the 17th of this month, the meeting, for the twentieth time of the honored Institute, should not be forgotten, and its membership should be represented to the fullest extent. It will also be in order for the Western Association to continue its committee appointed last year to attend the Institute convention. The cordial relations already established between the Western Association and the American Institute should be in every way fostered by the members of both.

ACCORDING to a paragraph in the *Gazette des Architectes*, the trades unions of Paris, instead of stirring up conflicts between employer and workmen, and boycotting everyone who refuses to join and sustain their organization,

as is the rule in this country, prefer to devote their energies to the elevation and instruction of their members, and to raising the standard of work in their special line. The Paris Masons' and Stonecutters' Union maintains a practical school, from the first of October to the first of April every year, with classes in reading, writing, spelling and arithmetic, and in drawing and applied geometry with special reference to masonry and stonecutting. There is, beside, a practical course in stonecutting, including full-size details and the laying out of work, also a class in the measurement and valuation of work. All these classes are presided over by instructors of first-class ability. There is no charge whatever to the members who attend these classes. Every week the society has a reunion for the benefit of all its members, and once a year rewards of considerable value are given to those pupils who have made the most progress. Last year these classes were attended by two hundred and sixty workmen or apprentices. In case of sickness each scholar has the benefit of medical attendance free. The model association has just completed a building for its own use which, among other accommodations, includes a number of furnished rooms and workrooms (cabinets), which may be rented by its members at prices varying from \$3 to \$10 a month.

ARCHITECTS and property owners in St. Louis have been subjected to a considerable petty annoyance for several years past through a meddlesome building ordinance, which, among other capricious and gratuitous restrictions, forbids the construction of any feature of a building which shall project over the building line of a street, "except a balcony at the second floor." In view of the fact that an oriel at the second floor is no more of an obstruction to the street than a balcony would be at the same level, architects in St. Louis have repeatedly offered plans with such windows, but have been refused the necessary "permit" unless they would omit the oriels. A few weeks since, the city officials encountered in the Messrs. Sheehan a couple of owners who could not be frightened, and who had the courage to test the legality of this ordinance in the courts. They were completely successful, the complaint against them being promptly dismissed, and a reprimand administered by Judge Cady to petty officials who seek to take advantage of a little brief authority to obstruct the progress of city improvements by inconsistent, unwarrantable and capricious restrictions. A little courage is an excellent thing sometimes.

THE annual destruction of property through fires in the United States is something almost appalling in its magnitude, and altogether disgraceful as to its causation. The *Chronicle* newspaper, of New York, has prepared tables from which it appears that in the year 1885, dwelling houses, alone, to the value of over thirteen million dollars were obliterated by fire. This is over a million dollars a month, and nearly all of it is due to bad construction, carelessness, or crime. Among the reported causes, next to incendiarism come defective flues as producing the greatest number of fires of all kinds, and in dwelling house property this cause heads the list. Then, in the order of frequency, come matches, sparks, and lamp explosions. A surprising number of dwellings are still destroyed through forest and prairie fires, though very probably to most of our readers an old-fashioned prairie or forest fire would be a curiosity. A great number of fires in dwellings are annually caused by gas jets. The introduction of the electric incandescent light will tend to remove this danger. Lightning and fireworks cause about an equal amount of damage every year by fire. The same is true of unprotected stovepipes, furnaces and hot ashes. Tramps

and cigar stubs and defective heating apparatus are nearly alike in incendiary destructiveness. The smallest fire loss, strange to say, is credited to children playing with fire, gasoline explosions, and defective lighting apparatus. The damage done from either of these causes is considerably less than from burglars, or from drunken men. No fire loss is charged against drunken women—whether because they are so few, or so harmless when drunk is not stated.

WE have already, in a former issue, informed our readers of the new Exposition Universelle to be held in Paris in 1889, the preliminary measures for which are now well advanced. Some extracts from the architect's specification for the exposition buildings, which we find in *La Semaine des Constructeurs*, will be interesting as showing how problems familiar to American architects are dealt with abroad. One of these problems is the question, how far the explicit or inadvertent acceptance of work shall bind the architect who afterward finds it to be defective. The French specification is as follows: "All materials must be of the best quality in every respect, and properly worked and set up according to the rules of the trade. They must not be used till they have first been provisionally inspected and accepted by the architects or engineers or their deputies. But notwithstanding this provisional acceptance, they will be subject to rejection at any time before the final acceptance of the work, in case any defect in material or work should be discovered, and must be replaced at the cost of the contractor."

A FREQUENT embarrassment with an architect who is superintending a building which must be completed within a certain fixed time, relates to the acceptance or rejection of work which is not quite satisfactory, but cannot be removed and corrected without a delay which may be much more serious than the inferior quality of the work itself. In the specification for the French exposition buildings this difficulty is anticipated and provided against in this manner: "The contractor is to conform strictly to the design, without alteration or variation. All work or material not strictly in conformity with drawings and specifications must be corrected at once on the order of the engineers or architects. Nevertheless, if the engineers or architects consider that the variations made by the contractor do not impair the stability nor appearance of the buildings they may be allowed to remain, but no allowance will be made to the contractor for any additional material or extra work on account of such changes. In such event he will receive pay only for the work originally contracted for. If, however, the changes made by the contractor should involve a saving to him of materials or work, a credit will be claimed for the difference in value between the work as executed and as drawn."

IN the matter of delay in the completion of work, the French specification appears equally just and rigid. The contractor is held responsible for all consequences and losses resulting from his own neglect, inexperience, mistakes and insufficiency of apparatus for the execution of his work. But if causes beyond his control occasion accident, loss or delay, the contractor may within ten days afterward present a claim for allowance or relief which will be submitted to the government for consideration. No claim will be considered if not made within the ten days, however. The contractor is further required to perform under his contract any additional work which may be desired, not exceeding one-sixth of the total amount contracted for. Beyond that limit he is at liberty to decline.

The Disposal of Sewage of Isolated Country Houses.*

BY WM. PAUL GERHARD, C. E., CONSULTING ENGINEER FOR SANITARY WORKS.

Continued.

THE proper disposal of the sewage of larger country or suburban residences fitted up with all the usual plumbing appliances is often, indeed in most cases, a much more puzzling problem. What shall be done with the more or less large daily volume of sewage of detached and isolated country houses, without creating a nuisance either on one's own premises or on those of the neighbors? This is a question of much interest to thousands of householders who live in the better class of country or suburban houses, and who are often compelled to meet the difficulties as best they can. The problem has long engaged the attention of civil engineers, who make a specialty of sanitary drainage, and while it is possible that the best solution has not yet been discovered, there are several methods which are in more or less successful use. Whatever method of disposal of the sewage may be adopted, it is obvious that one must decide about it before arranging the house drainage system inside of a house, for the best arrangement of the main drain and its branches in the cellar or basement of a house will depend upon the direction in which the sewage tank will be erected, or upon the location of the final outlet. Generally speaking, an isolated country house, not in reach of sewers, may dispose of its sewage by one or the other of the following methods:

1. It may discharge its sewage into an open surface ditch or gutter, removing everything from the house, and carrying the wastes into a more or less distant sink hole, or to some low spot where the sewage is allowed to soak away and to evaporate slowly. This method, based on the principle of "out of sight, out of mind," is a very primitive one, and one that has not a single feature of merit. As a rule, such a system becomes highly offensive to the immediate vicinity of the house.

2. The house drain may empty the sewage into a large open or leaching cesspool, allowing the liquids to ooze away through underground porous strata, or by fissures and cracks in the rock. This, although a very common method of disposal, is in reality one very dangerous to health, particularly so where the water supply is local, being derived from a well, a cistern or spring on the premises. It is a method utterly to be condemned as both unsafe and nasty.

The most primitive form of cesspool is a hole dug in the ground, into which all the sewage is continually poured, the result expected being that at least the liquid will soak away through unknown underground recesses, and disappear. Occasionally the sides of such a cesspool are lined with loose stones, laid dry, the liquid sewage escaping at the numerous open joints into the surrounding soil, while more or less of the solid matter and grease are retained in the cesspool, undergoing at once a very dangerous process of decomposition, in the presence of moisture, heat and darkness—all conditions known to be particularly favorable to the growth of dangerous bacteria or germs of disease. In dealing with sewage, a cardinal principle, always to be observed, is to avoid all stagnation. In the leaching cesspool we have the worst possible example of stagnation and of accumulation of putrefying filth on our premises. The great objection to a leaching cesspool is not only that it constitutes in itself an abominable nuisance, comparable to a powder magazine, which merely needs a single spark to create destruction, but that it unavoidably and invariably pollutes the subsoil in the neighborhood of dwellings, contaminates the water supply, and renders the air which we breathe obnoxious by its exhalations. If we consider for a moment that such isolated country dwellings and farm houses, which are not in reach of sewers, also usually do not enjoy the benefit of a public water supply, but must derive their potable water from wells, cisterns or springs on the premises, the full extent of the evil and the force of our objections become more apparent. It is, indeed, of the utmost importance that the local water supply of isolated dwellings be kept as pure and free from contamination as possible; but even supposing that water is introduced from a street or public supply, the enormous evils of soil pollution and air contamination remain. Two thousand years ago, an old philosopher, Hippocrates, preached a sanitary formula, which has not been improved up to the present day. Recognizing the dangers to health resulting from neglect of sanitary precautions, he expressed his advice in the words, "pure air, pure water, and a pure soil." What, then, shall we say if some of our best architects of the present day persist in suggesting as the most convenient and ready means of getting rid of the sewage of a country house the adoption of a leaching cesspool?

I admit that in sparsely populated country districts a leaching cesspool, located at a great distance from, and at a lower level than, the house, may sometimes be used without causing any harm to the occupants of the house. As a matter of principle, however, sanitary science must condemn such devices in every case. If the principle is true that we should speedily

return all organic dirt and filth to the earth, it should be carried out in such a manner that the soil may accomplish the complete destruction of organic filth. We shall see, further on, that this can be done only near the surface of the soil, and by application of the sewage before it becomes putrid.

In pouring our sewage into leaching cesspools, on the contrary, we bury all matter deep in the ground, remote from the cleansing, oxidizing effect of the atmosphere, of the purifying action of plant life, and of the help which is rendered by some of the low organisms, or so-called bacteria, in the process of nitrification and destruction of organic matter.

Then, again, another important consideration should not be lost sight of, namely, that often where a leaching cesspool cannot work any danger to our own house, our own well or spring, it may pollute shallow or deep wells belonging to adjoining estates. It is, therefore, evident that as habitations are grouped closely together, leaching cesspools become more and more inadmissible. If we are selfish enough to locate such a cesspool in the remotest and lowest corner of our own garden, entirely forgetful of its immediate proximity to our neighbor's drinking-water well, it is but perfectly proper that our health authorities should remind us that we have some obligations to fulfill against our neighbors.

Occasionally, such cesspools are built with the sides solid, leaving only the bottom loose for the escape of sewage, or in cases where they are originally open on the sides, the pores soon clog, and the removal of the liquid then takes place in a very imperfect manner.

3. The house drain may deliver the sewage into a tightly built cesspool, provided with an overflow-pipe carried into some ditch or water-course. Such an arrangement may be considered a direct outcome of the leaching cesspool. Desiring to avoid the pollution of the soil, the architect or owner built the cesspool with tight sides and bottom, but, finding that it would rapidly fill up, and that frequent pumping out would be expensive, an overflow was taken from the cesspool, and the surplus of liquid sewage carried away. While such a tight cesspool with overflow located far away from the house, and with the overflow carried into some large volume of rapidly flowing water, may be unobjectionable, where but little water is used in a house, the arrangement constitutes in the case of larger houses a fearful nuisance, for the sewage is already putrid when removed.

4. The alternative is to empty the sewage into a cesspool built absolutely tight and without overflow. Such a cesspool avoids the pollution of the water supply, and also the contamination of the subsoil. It is, therefore, an arrangement much to be preferred to a leaching cesspool and permissible under certain circumstances. Perhaps I should rather call it a sometimes necessary evil, for it should be borne in mind that it involves a long temporary storage, and does not effect an immediate or nearly immediate disposal. Hence it cannot be approved from a sanitary point of view, and its objections are many and serious ones. Since it is the object of all good drainage to get rid of filth from the premises at once, or else to dispose of it on the premises while *fresh*, so as to be completely taken up by vegetation and purified by the soil, it is evident that a vast receptacle of accumulated filth cannot be considered a sanitary device. The stagnating sewage within the walls of the cesspool undergoes a process of decomposition, and the gases generated are extremely unwholesome, often causing, by improper escape, or by entrance into houses through the sewer pipes, a nuisance. To ventilate such a cesspool successfully, is rather a difficult, and often an impossible, matter.

To overcome some of these objections, it is the habit of some architects to use two cesspools for a single house, delivering into the one all water-closet wastes, while the other one is intended for the reception of kitchen and laundry water. I do not approve of such an arrangement. Practically, it is found that after awhile both cesspools do not differ materially, as regards the degree of putrefaction and offensiveness of their contents; nor can I see any sense in duplicating or multiplying the dangers which adhere to all cesspool arrangements.

There are some cases where no good feasible way of dealing with sewage may be devised other than to run it into a tight cesspool. In that case, the following precautions are to be observed: The cesspool should be located as far away from the house as possible, and there should be a proper disconnection between the house and the cesspool. The latter should be built in two compartments, the first of which constitutes an intercepting chamber for the solids, while the second and larger chamber will receive the liquids. Both chambers should be built thoroughly tight, of hard-burned brick, laid in hydraulic cement, preferably of a circular shape, and the walls should be well rendered inside and outside with Portland cement. Each chamber should be arched over and topped with a manhole, covered with a tight iron cover. The cesspool should be as well ventilated as it is possible to do, and it should be emptied, cleaned and disinfected at frequent intervals. The separation of the liquid from the solid matter facilitates much the disposal of both. The liquids may be bailed, or better, pumped out, and used to sprinkle and irrigate the

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lawn, or a kitchen garden, shrubbery, vine trellis or apple orchard. The solids should be removed and dug as fertilizers under the soil. The oftener this is done the better, and the less offense will be caused by the application of sewage to land.

Some objections to a cesspool always remain. If it is built, as it should be, *absolutely* tight, and of moderate size only, to avoid the retention of too large a volume of sewage, then the necessity of frequent pumping arises, and with it the annoyance of constant attention and of manual labor. If we enlarge the dimensions of the cesspool to avoid the frequency of pumping out, we increase the dangers always resulting from stagnant sewage, and create, as it were, a large gasometer for noxious gases.

(To be continued.)

ERRATA.—In previous number, page 38, first column, fourteenth line from bottom, read "which *in turn* requires," etc., instead of "which we know requires," etc.

Some Building Failures.

BY J. F. ELSOM.

IF "unknown causes" were an individual or firm, the wealth of a nation would hardly be adequate to meet the judgments entered by the losers of buildings falling long before their time, caused by either improper construction, materials and season, or perhaps wanton ignorance of some, or the miserly attributes of others. "Unknown causes," however, being insolvent whenever we hear of the premature collapse of a structure, and the daily papers generally contain one or more accounts, the experts (?) in their zeal to shield each and all from all blame and liability for damages for the loss of life and property, saddle, at one fell stroke, the entire responsibility upon unknown causes.

If here and there, however, we learn of isolated cases where the mill or house loser is not content with what the verdict says, and seeks some causes that are known, then accounting for his loss of stock, machinery and profits of his business. A case still fresh in the minds of many, where the structure, a fine, massive building, devoted to the manufacture of paper, fell one night without a moment's warning, burying thousands of dollars' worth of machinery and a large stock, when it was shown that the various floors were carrying a much less load than formerly, and were always considered safe and strong; but the building fell, nevertheless, with the stereotyped verdict of experts, from some cause or causes unknown, while a close scrutiny of the immense pile of debris revealed that many agents of disintegration had been at work, the greatest wonder being that it stood so long as it did, but perhaps would have stood longer had the floors been kept weighted down.

In this case, not an isolated one by any means, the iron girders had crystallized, and the instant the loads were removed the molecules of the iron lost the last property of cohesion, a characteristic peculiar to this material, and, of course, had no more tensile strength than as much fine sand, in fact, certain situations of portions of these girders were just right to favor separation, there being nothing save the foundations (and in a previous article this subject was discussed) and the bare wall, in and out of line, to prevent the structure from falling, with a very slight increase of pressure of one portion over another.

In this country, more especially in the larger cities where the more massive structures are built, we can at least calculate upon but four primary factors, wood, clay, stone and iron, and in very many instances they are all that the specifications call for. Take any of these three, or the lot entire, and I venture the assertion that the two sciences of chemistry and physics do not treat of four substances differing in their essential characteristics to the extent that these do, and, strange as it may appear, 'tis not less strange than true, these very properties in which they so widely differ, are the ones upon which the architect pins his faith. To a certain extent, however, these deficiencies and redundances, may be made to dovetail, as it were, the one aiding the other in sustaining the superstructures, but in many respects the strong parts are in the wrong places by virtue of the manner in which these substances are placed together in the erection of the building.

Nearly everyone knows that the large iron rods often placed across the building from one side to the other may be broken by heating with a lamp, and the nuts screwed home as fast as the rods expand, what then must be the condition of things when these rods, or what augments the evil, large iron girders pass near a firebox or steamchest, thus subjected to alternate heat and cold, a process favorable to crystallization at the ends, or a constant tendency to contract, thus drawing the walls out of true on account of other rods and girders being remotely situated as regards the fire, hence not subjected to this constant expansion and contraction. A large building in a manufacturing city on the Ohio began to draw in at the sides and was condemned by the city authorities, and upon a mere casual examination a two-inch iron rod across the center was responsible for the mischief, it being tight, while the two others, one at each end, were loose. This rod

was immediately over the gas jets, eight in number, and the heat from them had contracted the rod to that extent that the walls were drawn in, and the floors, though covered with machinery, were sprung in all manner of shapes, and though the walls were found quite badly cracked they were not difficult to straighten, and the house will stand a long time for light work or storage.

Moreover, with a pile of brick and mortar, the former put in in proper condition as regards moisture, the latter made so that pure silicate of lime will be formed, cannot be changed in any way the least particle without cracking somewhere, and every crack however minute, tells us in tones that all should fully understand, that something is wrong and a fall somewhere will follow in time. Then we place timbers, that will not shorten in seasoning, across, firmly securing the ends to timbers running at right angles; often laid in the walls these will decrease in width by seasoning, and is it any wonder that walls and ceilings will persist in cracking at the corners, or that some of the floors will soon become shaky, some hump up and others sink down in places, that the line of shafting will persist in continually getting out of true, windows, shelves and showcases crack, machinery groan and creak, gears eating each other, and belts eternally running off.

But a short walk and limited, but close observation, in any of our cities will show that American buildings are not made to stand the lapse of centuries like some have done in other lands. We have as good and lasting building material as can be found on the globe, but architectural tastes have too often run to the ornate and beautiful instead of to the stable and safe, and so long as our house or mill outshines that of our competitor and neighbor in beauty, grandeur and massiveness, we think little and seemingly care less which will last the longer and stand the strain better. Architects are not alone to blame for this condition of things, neither are the builders or owners, but all together should see that provisions are made for the distinguishing characteristics of building materials, that no building shall be erected without such provisions, and in one decade this stale, stereotyped "Unknown Causes" will become dead matter.

(To be continued.)

Hardwood and Hardwood Finish.*

BY H. V. WAGNER.

I SHALL confine myself principally to the practical side of the question of hardwood finish. It is almost a year since I have been engaged with any work of the kind, and have already become quite rusty. To begin, I think we should consider the very substance of our subject, the wood, its qualifications for the uses it is to be put to, its relation to the color effect of the future decoration of the house, and in many cases its cost. If a man thinks of using hardwood, very likely one of the first questions will be as to the extra cost over pine, as to the future cost of keeping hardwood in good shape. I think there is little question, for if done properly in the first place, it can be taken care of at very little expense. Among the ordinarily used woods are cherry, oak, walnut, birch, sycamore, maple, ash, butternut, redwood, mahogany and a great many fancy woods, such as rosewood, satinwood, ebony, etc.

The latter is very rarely used; I think the market price now being over a dollar per pound. Satinwood is also very expensive, the labor of preparing it costing enormously, as a man must about equally divide his time between sharpening his tools and doing his work. The principal consideration in accepting wood for work is whether it is thoroughly seasoned, as this is one of the things which leads to much trouble in the future. By this I do not mean baked, but thoroughly weather-seasoned, having been cut at least three years and kiln-dried properly under not too extreme heat. There is also an opposite evil in having your wood too dry when it will swell from the dampness usual in new buildings, and create as much, if not more, trouble than when green.

Oak is one of the woods which receives most consideration under this head, as it seems to create most trouble, but when properly seasoned and dried, I have experienced very little with it. I think it the most substantial, and when quarter-sawed, as handsome as any wood we use in our modern houses, especially when it has received an antique finish, when it will remain perfect for many years, age rather adding than detracting from its beauty. It is tough and does not easily mar, which is another point in its favor. By all means avoid using very soft wood, such as butternut, redwood, etc., as I do not think they are worthy of the expense of doing good work with. I have had a very intimate experience with the furniture in my own room, being very partial to mahogany. I found that butternut really made the best imitation. When stained the proper color it could hardly be told from the real. I have been very sorry since, as although not much more than a year old, it has become so marred that it looks as though it might have been used ten times as long. I would like to add right here, by all means avoid all imitations and shams, and if you have a client who wants them, try to convince him that they are wrong and about as shoddy as imitation jewelry or any other object which pretends to be what it is not. In a great many of our fine houses, pine is used for the chamber floors. I think this a mistake, as it could be replaced by a good hardwood at very little additional expense, especially as in many cases where it receives a hardwood finish. I think birch a good substitute which ought not to cost over ten per cent more than pine, as the cost of good wood of either kind is about the same, the extra being in the labor only. In fact, I have done several very fine jobs of pine work, when the

* Paper read before the Chicago Architectural Sketch Club, October 25, 1886.

lumber cost almost as much as cherry. Of course, if the wood is to be painted from a decorative point of view, I suppose pine will answer the purpose. In selecting the wood for different rooms avoid as much as possible sharp contrast, try to have them all in harmony, also use the strongest wood in the rooms most used, as these will receive the most wear, and will be able to stand it best. I think a good selection would be white oak quarter-sawn, antique finish in hall, dark birds-eye maple in parlor, natural mahogany in library, natural cherry in living room, red oak finished, dark in dining room, kitchen and laundry, backhall in oak, and birch for all chambers.

In regard to cost, I think the various kinds of wood can be named in about the following order: Pine, birch, butternut, ash, maple, sycamore, oak, cherry, walnut, mahogany, etc. In making sketches for any work, do not let your artistic desires run away with the practical consideration of the work in hand. Never forget construction; it is the foundation of good work. Do not make a pretty picture only, but think how it can be made substantial. I have been called on to estimate on architects' designs which looked more as though they were intended for masonry than wood-work. I have a mantel in mind which had to be made with very heavy lumber, there being no possible way of framing it. Of course such work will not stand, and in this case especially it did not. Being of oak, it was less than a year later that I was called on to repair it. Have all work constructive, that is, so it can be paneled and framed, as the framing, if properly done, will stand, and the panels are free to shrink and swell without danger of damage.

In making the drawing for a whole house, it will be well to remember that it will have to be taken care of, and the simpler the work, the more readily this can be accomplished. Seek beauty in form rather than in elaborate detail, have carving in the proper place, but do not because it is cheap, have all your work full of beads, cuts, grooves, engraving, etc. A handsomely grained piece of wood, with plain surface, is much better than an inferior piece loaded down with gingerbread decoration. Avoid applied ornaments, rosettes, etc. A cabinetmaker will, in nine cases out of ten, think a little glue is sufficient to hold them in place forever, but he is mistaken. I have had much trouble to get these things properly done, and came to the conclusion that it was best to drop them and run no chances of having your clients coming to you and saying that their work is falling to pieces. In making an odd piece of furniture, you may spread yourself on detail, but I think the foregoing remarks will hold good when planning a finish for a whole house.

There are a few things I would like to say about mantels. A great many manufacturers and architects seem to forget that parties buying mantels expect to use them, and that they should be constructed so that there is no danger of fire or necessity for getting all the pans and kettles in the house to protect it, as a friend of mine had to do with her dining room mantel. The projections beyond the tile work should be very little, so that direct radiation would not affect them.* In a mantel with six inch tile facing there should not be more than one or two inch projection, with twelve inch facing it might be double. The lower shelf and sides also should not come too near brickwork of fireplace; also bear in mind the size of opening, so that a certain size of tile will exactly fill it.

To make a good finish be careful to have the wood very clean and smooth, as no amount of finish will overcome this if neglected at the start.

The wood should be properly filled with Wheeler filler, or any other of equal merit, and then given three coats of lard oil and rubbed down to a smooth finish. If a fine finish is required, give the work two coats of shellac, each sandpapered, then give it three coats of lard oil, rubbed between coats, when the result should be as near perfect as it can be made; this kind of finish is advisable, as it will stand dampness. It can be cleaned with a damp cloth without injury. Another way of doing very good work is to use five or six coats of shellac, which will give a very good result, only that it will not stand dampness, turning white. The only kind of staining advisable is to darken oak to make it appear old. This is done in various ways. Aniline or color stains, I think, are not advisable, as they will fade and look very bad in a short time.

In regard to styles of work there are a large number, all of which have their good and bad points, and any of which, when carefully used, will give good results. There is only one to which I particularly object, that is the finishing of a room in white and gold. I think every circumstance of our daily life, climate and present age is against this style of work. In the first place it will be a most difficult task to keep such a room looking respectable, particularly in a smoky city, and then the contrast to our generally rich decoration and natural wood is far from pleasing. Then imagine a company of ladies and gentlemen in dark, rich colored attire of the prevailing fashions of the day, and you can picture to yourself the extreme absurdity of the fashion in 1886. It may have been all right with powdered wigs, silk and satin of very light colors, etc., but today I think we should avoid this kind of work. Do not choose a distinct style for every room in the house, even though money is no object, make the whole effect restful and a place where every nook suggests comfort and ease and not rigid formality or excite the curiosity of a museum.

THE Chicago & Alton railroad as a route from Kansas City and other Missouri points to Chicago, St. Louis and the east, offers advantages that are not and cannot be equaled by any other. Its trains start from the Union depot in Kansas City after the arrival of trains from the West and run through St. Louis, Bloomington and Chicago, where connections for all points further east are made in union depots. The Chicago & Alton is the only line running palace dining cars to and from Kansas City. It makes no extra charge for seats in elegant and comfortable palace reclining chair cars, which are run on all trains. It runs the newest and most superb Pullman palace sleeping cars. There is no change of cars of any class between Kansas City and Chicago, and Kansas City and St. Louis, and St. Louis and Chicago. Tickets via this popular route are on sale at all coupon ticket offices in the United States.

*See article and diagram by Francis Le Baron, in Vol. III, No. 4, page 48, INLAND ARCHITECT AND BUILDER.—ED.

Association Notes.

WESTERN ASSOCIATION OF ARCHITECTS.—Convention will be held November 17, 1886, at Chicago. John W. Root, Chicago, secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Saturday of every month, at 15 East Washington street, Chicago. Annual meeting first Thursday in October, 1887. Clarence L. Stiles, Chicago, secretary.

INDIANA STATE ASSOCIATION OF ARCHITECTS meets on the fourth Wednesday of January, April, July and October of each year. Annual meeting fourth Wednesday in October. E. H. Ketcham, Indianapolis, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at St. Louis on the second Tuesday in January, 1887. Thomas B. Annan, St. Louis, secretary.

KANSAS CITY SOCIETY OF ARCHITECTS meets Monday afternoon of each week, at 4 o'clock. Annual meeting second Saturday in April, 1887. F. B. Hamilton, secretary.

BUFFALO SOCIETY OF ARCHITECTS meets first and third Tuesdays each month. W. W. Carlin, secretary.

THE ARCHITECTURAL ASSOCIATION OF IOWA, annual meeting, second Wednesday of January, 1887. C. H. Lee, Des Moines, secretary.

THE ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 4, 1887. Irving W. Kelley, Minneapolis, secretary.

KANSAS STATE ASSOCIATION OF ARCHITECTS meets at Topeka on the third Tuesday of January, 1887. H. M. Hadley, Topeka, secretary.

ASSOCIATION OF OHIO ARCHITECTS meets semi-annually. Next meeting third Thursday in January, 1887. O. C. Smith, Cincinnati, secretary.

ASSOCIATION OF TEXAS ARCHITECTS meets at Austin on the third Tuesday of January, 1887. S. A. J. Preston, Austin, secretary.

NEBRASKA STATE ASSOCIATION OF ARCHITECTS meets first Wednesdays in January, April, July and October each year. F. M. Ellis, Omaha, secretary.

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday, Builders' and Traders' Exchange. W. G. Williamson, secretary.

THE WESTERN SOCIETY OF ENGINEERS meets the first and third Tuesdays of each month at 4 o'clock P.M., at 15 East Washington street Chicago.

THE MASTER PLUMBERS' SOCIETY, of Chicago, meets first and third Wednesdays of the month, 7:30 P.M., at 15 East Washington street.

THE ANNUAL MEETING OF CHICAGO ARCHITECTURAL SKETCH CLUB.

The annual meeting was held on the 8th inst., about thirty members present. The minutes of the previous annual meeting were read by the secretary, who also read his annual report which briefly reviewed the work of the year. The treasurer presented a partial report, and Robert Williamson and E. O. Christian were appointed to audit and report at the next meeting. The election of officers being next in order, Harry Lawrie was reelected president; Geo. Beaumont, first vice-president; Irving K. Pond, second vice-president; W. G. Williamson was reelected secretary; Mr. C. A. Kessell was unanimously reelected treasurer, but upon his declining, and his reasons for so doing being accepted, C. W. Trowbridge was elected treasurer. Two members elected to complete executive committee were F. O. Frankel and M. G. Holmes.

The following notice has been circulated among the members, and was read by the president.

LIST OF DRAWINGS REQUIRED FOR THE EXHIBIT OF THE CHICAGO ARCHITECTURAL SKETCH CLUB, NOVEMBER 15, 1886.

The drawings will be divided into the following departments:

1. The club drawings exhibited at the Industrial Exposition at Minneapolis.
2. Pen and ink drawings of buildings in perspective.
3. Water-color drawings of buildings in perspective.
4. Miscellaneous sketches in pen and ink.
5. Miscellaneous sketches in water color.
6. Sketches from nature (buildings, landscapes, etc.), in pen and ink, and water color, etc.
7. Sketches from photographs of foreign buildings.
8. Sketches from photographs of domestic buildings.
9. Club competitive drawings.
10. Sketches in pencil made at club meetings and others.
11. Sketches in oil.
12. Initiation sketches.

NOTE.—As very few of the charter members have fulfilled the letter of the by-law relating to initiation sketches, we would propose that each member submitting sketches, place one with this group.

READ THE FOLLOWING CAREFULLY.

No drawings except those made by club members to be accepted. Drawings to be framed or not, at the option of the contributor. All color, or pen and ink copies, to be excluded. Drawings must be delivered to the secretary of the club, 157 La Salle street, room 107, on or before November 12. In order that this exhibit may be as large and comprehensive as possible, each member is requested *not* to select, but send as many finished drawings or sketches as possible.

In order that drawings may be properly catalogued, a complete list of drawings must be presented with them when they are handed in, and each drawing marked *on the back* with name and address of the owner. No drawings received after the 12th inst. can be catalogued.

By order of the Executive Committee C. A. S. C.

W. G. WILLIAMSON,
Secretary.

HARRY LAWRIE,
President.

After a general discussion in regard to arrangements for the social meeting of the club on the 15th inst., the meeting adjourned.

INDIANA STATE ASSOCIATION.

By mistake, the name of Bernard Vonnegut, of Indianapolis, was omitted from the list of accredited members present at the convention, October 21. A printed copy of the constitution and by-laws has been received, with the seal of the association, which was sketched by Mr. Vonnegut and adopted by the Executive Committee. It is a head of Minerva, goddess of the arts and sciences, encircled by the name of the association, the emblem of the triangle and dividers, and also fragments of architectural details, were intentionally avoided because so much used in the seals of masonic societies. It is a very chaste and pleasing design.

REGULAR MEETING OF THE ILLINOIS STATE ASSOCIATION OF ARCHITECTS.

The meeting was called to order Saturday, 6th instant, at 1 o'clock P.M., the date of the meeting having been changed to the first Saturday in each month by the new Executive Committee. After the discussion of a lunch which was in every way a credit to the new regime, the meeting was called to order, President Adler in the chair.

The minutes of the previous meeting having been read and approved, the president called for the report of the Executive Committee of the Western Association, and Mr. John W. Root, chairman of the committee spoke as follows: It has been deemed desirable that we should now look into the future and see what is to be done in a permanent way for the association. We have thought that we should know sufficiently well where we are to remain as to warrant the Executive Committee in taking such steps as are necessary for the accumulation of a library; for the storage of such pictures and books as may be contributed by the various members of the Illinois State Association and, in a general way, for the making of the quarters of the association what they should be. We all look forward to the time when the rooms of the association shall become more or less popular as headquarters for the draughtsman as well as the architect, so that during the day they will not be entirely deserted; and in this view we have thought that it is probable members of the association would be very glad to contribute books, photographs of their own work and of others' work, etc.; and we are also of the opinion that there are a great many members of the association who might be approached individually, and perhaps would be very glad to contribute considerable sums in one way or another, which could be expended by the committee specially appointed for that purpose. Then, it has seemed to us that ultimately there must be somewhere in Chicago a permanent headquarters of the Western Association as such, just as the American Institute has a permanent headquarters.

Special committees have been appointed, among them an Executive Committee, to look up all the details relative to these particular matters, and as soon as these committees have reported and we are in a position to formulate a report we will do so, so that the bulk of our present report simply states matters in progress.

The President: Mr. Root will perhaps also state what has been said in the Executive Committee in reference to subjects for discussion at the future meetings of the association.

Mr. Root: The Executive Committee, among themselves, have discussed the matter alluded to by the president. At present each member of the association is preparing a list of subjects for the year. When we meet next week we will have these lists of the various individual members discussed, and the result will be the preparation of a programme which we hope to carry out for the year. We are inclined to think that if the subject for discussion at a particular meeting is fully decided on before, suitable preparations can be made, and frequently those who should be present to take charge of the matter will have had time to do so. In this scheme which we propose, we have the idea of appointing two persons to lead in the discussion, these persons to be informed beforehand.

The President: I believe the Committee on Revision of Sanitary Law is prepared to make a report.

Mr. Baumann: The committee beg to be excused for having taken so long a time in this matter. The subject has been particularly difficult and complicated. We tried first, as is well known, to get up a law in which some of the different departments be consolidated. We found very soon that the thing was impracticable, and we had to abandon it. Then we fell back upon the idea of making up a special law—special regulations in regard to it, such as were proposed by Commissioner DeWolfe here. We took it to Mr. Genung, who went carefully through it, and we discussed it at five or six meetings, and, at last, agreed upon a form, which we have arranged as well as possible for the present.

Then, Mr. Beach has also prepared a law of some kind—in a different way from what we first proposed, but similar to it—which will come before the legislature in case this first one is defeated or laid on one side and that will take up the matter as at first contemplated, only in a very much milder, and, I will say, looser form. Mr. Beach will now read you the papers prepared.

The President: I will say in explanation of the two bills about to be read that one embodies the ideas of the health department of the city, who believe that it will be impossible to enforce a law that is not general in its provisions, and that it is absolutely necessary to have a law making specific provisions for each individual matter to be controlled. It is, of course, much more desirable to have an elastic law—that is, the right to regulate sanitary construction from time to time, and amend the law as may be necessary in view of recent discoveries, etc.

In framing the two laws—the one in accordance with what we think is most desirable, and the other in accordance with what seems to be most practicable—we have kept in view the necessity of excluding from the law that which determines specifically what shall hereafter be considered good sanitary construction, and about which there is any material difference of opinion among sanitarians. We have endeavored to formulate into the proposed law only those matters concerning which all of us are in harmony, and to exclude everything concerning which there is dispute. On that account we found it necessary to exclude many paragraphs from the law as it had been originally proposed by the health commissioners.

This bill which will be the basis for special discussion at the December meeting was read by Mr. Beach, as follows: It is entitled

An act to provide for the regulation and inspection of the sanitary construction and alterations or modifications of buildings in cities and villages, and to secure proper ventilation and sewerage systems for habitable buildings, and declaring certain things to be nuisances, providing penalties and for the issuing of injunctions in certain cases.

Be it enacted by the People of the State of Illinois represented in the General Assembly:

SECTION 1. It shall be the duty of the owner or other person interested in the contemplated erection or alteration of any building within the corporate limits of any city or village in this state in which there is established an officer or department of health to obtain from such officer or department a blank entitled "Description of Building," and fill the same in a manner fully describing said contemplated building, with its plumbing and sewerage fixtures, and to submit such description to the said officer or department for examination and approval, which approval shall be granted only upon condition that assurance direct and implied is by said owner or said other person given to said officer or department of health that the sanitary conditions of the building will be, when completed, in accordance with this act. And in case the said building intended to be erected (or extensively modified) be for purposes of habitation then and in such case a full set of drawings, showing locality and arrangement of plumbing, sewerage and all other sanitary arrangements to be provided in the said intended building shall by said owner or other person (or the architect or plumber of said owner or person) be submitted to said officer or department for action as above set forth before any portion or part of the said building shall be commenced or modified.

SEC. 2. No building permit shall be granted or issued by any officer or building department in such city or village before the approval provided for in Section 1 of this act is obtained (in the manner provided in said section), and presented by said owner or person to said officer or department.

SEC. 3. The person executing the plumbing work, or causing its execution, in any such building other than mere repairs, shall (before in any way concealing or allowing such work to be concealed) notify, in writing, the said officer or department of health to the effect and substance that the said plumbing work is then and there in the state of completion and shall allow such officer or department a full day's time after said notice (not including Sunday) for the proper inspection of and officially passing upon said work.

SEC. 4. Every habitable building hereafter erected in any such (said) city or village shall have its ground floor covered with a firm stratum of cement and gravel or asphaltum concrete not less than three inches in thickness.

SEC. 5. A habitable room in any building shall have one or more windows of dimensions not less than one-tenth of the area of floor space of each room, and an open space or light shaft shall be established for such window or windows, and shall have an area which, for a three-story building, shall equal not less than one-sixth part of the area of rooms and halls thereby to be aired and lighted. Such minimum size shall receive or have an increase of five per cent for each and every additional story of building.

SEC. 6. Every skylight hereafter constructed in any such building shall be permanently ventilated through openings or air ducts in or near and extending at least one foot above its top, and the area of such ventilating openings shall not be less than one twenty-fifth part of the area of skylight opening.

SEC. 7. A habitable room in any building hereafter erected in any such city or village shall not be less than eight feet in height between joists of floor and ceiling, nor shall its floor be located more than three feet below the established inside grade at the line of the lot of land upon which said building is or is to be erected. No such room (except an attic room) shall be established in any present building heretofore erected unless the said room be established and constructed in accordance with the requirements of this Act, provided, however, that in buildings heretofore erected an attic room may be ten inches less (at its lowest point) in height than said eight feet.

SEC. 8. Every water-closet or bathroom hereafter constructed in any such city or village shall have permanent automatic ventilation through an independent air shaft not less than one square foot in its cross section. Such shaft shall extend not less than two feet beyond the surface of roof and be not below any peak, observatory or other construction upon the roof thereof that may be located within twelve feet of such shaft, and such closet or room shall be lighted by a window either in an exterior wall of the building or in a light shaft constructed for the purpose, or by facing a general light shaft or any adjoining room which said window shall (in said last mentioned case) be stationary.

SEC. 9. No privy vault of any kind shall hereafter be constructed or allowed by the owner of any lot or lots of land situated in any such city or village to remain in any building, or upon any lot of land adjacent to a street or alley in which there is a public sewer established in front of or adjacent to said building or lot.

SEC. 10. No alterations, additions or modifications which will change or alter any or all of the sanitary conditions or arrangements in any building erected or located in any such (said) city or village, shall be made, except upon prior express approval, in writing, of the said officer or of the said department of health. Nor shall any additional structure be erected upon any lot of land situated within such city or village upon which there is already a building erected without such approval, and a special permit in writing from said officer or department.

SEC. 11. All sewerage drains hereafter laid in such city or village shall be laid with a uniform decline of not less than one-tenth of an inch to the foot, and there shall be constructed by the owner of any such building a trap and adjacent air inlet in connection with the drainage system of each building, where such drainage system is located, either wholly or in part without such building, said air inlet shall be located outside of said building, and shall be kept clean and unobstructed. The

entire sewerage systems in any such building hereafter erected shall be so constructed as to allow ready and complete inspection at the time of its completion.

SEC. 12. Metal sewage drains and soil pipes, if not enameled or made of non-corrosive material, shall be covered inside and outside with a coat of asphaltum, and all their joints and connections shall be made absolutely airtight by means of molten lead or similar metal, or by means of molten asphaltum, either with or without an intermixture of sulphur.

SEC. 13. Every soil and every waste pipe hereafter constructed and placed as such in any such city or village, shall be of cast-iron, or brass or porcelain, and when such pipe is put up for use, it and the joints thereof shall be capable of sustaining an internal pressure of not less than fifteen pounds to the square inch of surface.

SEC. 14. The in-take ends of all drains and their branches in any building shall be curved to correspond with an inner radius of not less than twelve inches, so as to properly meet the horizontal drain and the perpendicular waste and soil pipe, and form an airtight connection with them, and there shall be near the lower end of such curved piece a hand-hole with airtight covering.

SEC. 15. The use or construction of any kind of pan water-closet in any building in such city or village is hereby declared to be a nuisance, and the use thereof is hereby prohibited. All water-closets used in any story of such building or buildings above the basement story shall be so constructed as to be connected with and flushed by means of a tank or tanks.

SEC. 16. No chimney flue of water leader-pipe shall be used for conveyance of exhaust steam or for ventilating soil or waste pipe.

SEC. 17. All sewerage and plumbing work in all buildings hereafter constructed in any such (said) city or village, shall be executed in a thorough manner satisfactory to the said officer or department of health, and all drains laid in any such building, shall be laid with the joints thereof made capable of resisting the water pressure resultant from filling the said pipe with water to their intake ends, and it shall be the duty of said officer or department, as the case may be, to make suitable and efficient tests as to the quality of all such work, and to test all soil, and waste-pipes when put up for use in any building, by subjecting them to an internal pressure of 15 pounds to the square inch, and to test all drains by filling them with water to their intake ends.

SEC. 18. Every water-closet, sink, and other plumbing fixture placed, and provided in, and for the use of any building hereafter erected in such (said) city or village, shall be connected with the sewer and provided with efficient trap, sufficient to prevent at all times the passage of air through the pipes from the sewer to the said fixtures, and no trap shall be placed and constructed at the foot of any water, soil, or ventilating pipe, and said plumbing or plumbing fixtures and pipes, shall be so constructed as to permit at all times without obstruction, the passage of a current of air from the air inlet mentioned in Section 11 of this act, below through all pipes last mentioned.

SEC. 19. Overflow guards or safes to any fixture or fixtures, and all refrigerators, shall have independent wastepipes, and shall not be connected with the drainage system.

SEC. 20. No grease-receiving basins or cesspools of any kind shall be constructed and placed for use within the walls of any habitable building hereafter erected within any such (said) city or village, nor shall any grease-receiving basins or cesspools heretofore constructed in any habitable building in such (said) city or village, be allowed to remain thereon or therein longer than thirty days after this act shall go into effect. In all cases when the area of a building erected or to be erected in such (said) city or village, shall occupy the whole of its lot, such grease-receiving basins shall be constructed under the sidewalk or underneath the surface of the alley, if any such there be adjoining the premises upon which said building is situated.

SEC. 21. No lead pipe shall in any building hereafter erected in any such (said) city or village, be connected with an iron pipe except by means of a metallic ferrule or other means expressly approved by the said officer or department of health.

SEC. 22. No duct or flue for admitting air to an apparatus intended for warming, shall be concealed below the concrete under the lowest floor of any building.

SEC. 23. Said officer, or any duly authorized officer of the said department shall, so far as may be necessary for the performance of his or their said respective duties therein, have the right to enter at any and all reasonable hours in the daytime, any building or premises in such (said) city or village.

SEC. 24. Any person violating any of the provisions of this act, or any said owner or officer who shall neglect or refuse to comply with any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof in any court of justice, shall be fined not less than two hundred and fifty dollars, and not more than five hundred dollars; recovery to be had in the name of and for the use of the city in which the offense shall have been committed or incurred.

SEC. 25. Any person convicted and fined as mentioned in section 24 of this act, who shall for the space of twenty-four hours next ensuing after being so found guilty by said court, fail to comply with the requirements of this act, or of any provision or requirement thereof, shall be deemed guilty of a misdemeanor, and upon conviction thereof before any court of justice, shall be fined in a sum of money not exceeding five hundred dollars.

SEC. 26. The Circuit Courts of this state and the Superior Court of Cook county are hereby authorized and required to issue, upon due application of any officer or department mentioned in Section 1 of this act, or of his or its duly appointed agents, in the name of said officer or department, an injunction restraining and preventing the use and occupation of any such (said) building or structure which is or shall hereafter be erected, altered or maintained, or the sewerage system of which shall be constructed, altered or maintained (or any portion thereof) used in violation of this act, or any of the provisions thereof.

SEC. 27. Any and all laws of this state in conflict with this act are hereby repealed.

The President: I would suggest the correction of two ambiguities in the above paper. One is in reference to making soil or waste pipes capable of resisting the pressure offered by a column of water 15 feet high. Of course, the pipe, as put into a building, means its joints, and as here read, it might mean only the pipe itself. The other is in reference to a free circulation of air through the soil and waste pipes from the inlet pipe below—from this is meant the inlet pipe inside of the trap and outside of the building. We will endeavor to correct both of these, so that there can be no misunderstanding.

Mr. Beach: In explanation of this second paper I am now about to read, I will say: this bill was drawn with a view to the fact that, as I am told, this matter of sanitary engineering is improving from day to day, and what may be considered good today, tomorrow may be found a little remote. The difficulty in the way of preparing a bill for obtaining a proper drainage system, is that we may fix by statute upon the people a law which is not at all desirable, but which in the course of a year, instead of being a benefit, may really be an injury. This bill has been drawn with a view to enabling the persons in charge of building operations to exercise sound discretion, based upon the evidence of men experienced in knowing what sewerage system is the best—that is, from time to time.

[After further careful consideration of this bill by the committee, it was decided to drop it, and place the first presented only before the association at its next meeting for consideration. The printing of this bill is omitted.—ED.]

The President: Gentlemen, you have heard the two ordinances as prepared by your committee. Your action in reference to the same, to either or both, of course is only tentative. We cannot make these proposed laws parts of the statutes of the state; all we can do is to indorse one or the other, and secure some friends for it, as we possibly can, and urge its passage upon the state legislature at its next sitting. While the second ordinance read is probably the one best calculated to secure a thorough and radical reform in the sanitary construction of buildings, give the greatest possible power to the commissioner, and also give him the discretionary power which he has not in the first bill; yet the committee is aware of the fact that in urging the passage of this enactment, it will probably meet with the opposition of the heads of departments in the administration of the city of Chicago, owing to the fact that this creates practically a new department, which has the power to control many things that are now within the control of these respective departments. It is for you to determine whether we shall endeavor, notwithstanding the fact that in urging the passage of this law, we will have to do so without the assistance of the local officials, and perhaps against their opposition—it is for you to determine whether we shall do this anyway, for the purpose of securing the best possible law that we can pass; or, whether we shall favor the passage of the first ordinance read, relying upon the assistance and support of the department of health, of the department of buildings, of the department of sewerage, etc., and thereby having a little better chance to secure favorable action by the legislature. Whichever draft or ordinance you determine to support, it will be necessary, probably, to appoint a committee whose duty it shall be to secure, first, the coöperation of as many of the officials interested in the execution of the law as possible; and, secondly, the assistance of prominent citizens, say the Citizens' Association, and also the Union League Club, which, as we know, is quite influential with the state legislature; and, finally, that as many members of the legislature from Cook county as possible be induced to promise support of the law. It may be necessary for such committee to go to Springfield for the purpose. It will also be necessary that each individual member of the association make it his business to create as much public opinion as possible in favor of the passage of whatever law the association desires to recommend; and it would be well, therefore, if this matter were carefully considered by you before determining whether it is policy to recommend the passage of both equally, leaving it to the wisdom of the legislature to make the selection, or whether it is best to pin our faith upon one or the other, and push that forward with all our might.

Mr. Baumann: It is necessary to have both of the prepared bills go before the legislature. There is always a committee appointed to whom these matters are referred, and it seems doubtful whether this committee would indorse any such bill as was first read here today. There are too many specialities in it which this Legislative Committee—generally composed of lawyers, principally, as I understand it—would not favor, they would, as Mr. Beach thinks, probably favor more the second one. However, inasmuch as the departments here favor the first bill rather than the second, it would seem better to try to get the first one through, using all possible means, and with their assistance; and then if it is found that the Legislative Committee is against that, then we can say: "Here is the other bill; if you cannot let the first through, then let the second pass," and in that way we have *something*. And it was with that idea that the two bills were prepared as they are.

Mr. Randolph: Has the former bill been printed, or either of them?

The President: No, sir; they will be, shortly.

Mr. Randolph: I see many things in the last bill that strike me more favorably than the first bill, but still I see things in the last one which may prove fatal to its passage. I make the motion that we leave further discussion of the matter today, giving us more time to consider it, and that it be made the special order of business for our next meeting.

The President: It is moved and seconded that the bills, as presented by your committee, be published in the official record of our transactions, and be made the special order of business for our next meeting. Carried.

After some further statements by the president and others, in regard to arrangements, etc., the meeting adjourned.

AN illustrated paper on a far-reaching question to which *The Century* has lately given much attention, is "The Need of Trade Schools," by Colonel R. T. Auchmuty, founder of the New York trade schools, who, in that magazine, discusses his subject with reference to what is being done in this line of progress in different parts of the world.

Our Illustrations.

Designs in ornamental ironwork by the Harris & Winslow Company, Chicago.

Competitive design for Kansas City Chamber of Commerce, by S. S. Beman, architect, Chicago. The design was intended for stone construction, and the cost estimated between \$500,000 and \$600,000.

Residence for Felix Bahlmann, Walnut Hills, Cincinnati, by George W. Rapp, architect, Cincinnati. The building is situated on the west side of Woodburn avenue, Walnut Hills. Its exterior is built of cherry-red brick, laid in brown mortar and Ohio freestone trimmings. The roof is slate, and the building is finished throughout in clear yellow pine varnished. Bronze hardware used in the entire building. Total cost of building about \$11,000.

Woodlawn school house, at Woodlawn Park, Illinois, M. L. Beers, Chicago, architect. It is two stories and basement in height, and arranged for eight rooms of sixty pupils each. The size of the building is 84 feet 4 inches by 82 feet 2 inches. The exterior is constructed of stone, pressed brick, and terra-cotta, and covered with a slate roof. It will be finished in Georgia pine and red oak, and will have Georgia pine floors. Each side of the entrance ways will be lined with a wainscoting of glazed brick, and all principal entrance doors will be of red oak. Particular care has been exercised in the lighting, heating, and ventilation, to make it one of the best schools of its kind in the state. It will be ready for occupancy September 1, 1887.

Entrance for Allegheny Cemetery, at Pittsburgh, Pa., by Architects Henry A. Macomber and John J. Dull, of Philadelphia. This cemetery, one of the largest and wealthiest in the country, having been recently enlarged by the purchase of a handsome piece of property extending about 600 feet along Penn avenue, decided to build a new entrance fronting on this thoroughfare. Invitations were sent to architects throughout the country offering a premium of \$1,000 for the best design, and a large number of drawings were sent in for consideration by the board. The premiated design which is illustrated in this number is one of two submitted by the above architects. The buildings consist of a reception room and dwelling for the gatekeeper on one side of the entrance, and a square tower on the other, containing an office in the lower story, the two being connected with the gateway in the center by covered passages. The extreme frontage is 120 feet, of which the tower and reception room occupy 25 feet each, and the gateway 30 feet. The material is granite, backed up with hollow brick walls, the general wall facing being laid up in squared broken range work with quarry faces. The roofs will be covered with red tiles. The plan shows the arrangement of the first floor, the second story of dwelling contains bedrooms and the upper part of the tower is only occupied by a stairway giving access to the open stage top. The floors of the arched passages, reception room and office will be laid with tiles on brick arches, and the interior finish of those rooms, the water-closet and ladies' toilet, will be of quartered oak, with paneled dados, the walls above being plastered with sand finish floated. The reception room will have an open timbered roof, a large open fireplace, with oak mantel, and stained glass windows. The office will have a paneled ceiling. The dwelling will be simply finished.

Endolithic Marbles.

A MATERIAL for interior ornamentation, which has as yet been little used in the West, and the beauties and possibilities of which have not as yet been appreciated according to their merits in the East is endolithic marble. No applied ornament becomes so intimately a part of the structural as this, reviving, as it does, the colored marbles of the ancients, and upon a basis of white marble securing the permanent imitation of all the marbles of the world.

An American chemist, named Hand-Smith, discovered how to affect slabs of Carrara so that the colors would penetrate to any given distance, and the surface take any amount of polish and sustain all ordinary wear and tear of weather and rubbing. Further improvements have been made on the Hand-Smith process by the chemists of the American Endolithic Company of New York, so that whereas it was possible to treat chemically a fine white marble so as to reproduce, chemically as well as visibly, all the important colored marbles, it is now possible to paint a marble surface with the "endolithic" pigments, and then burnish the surface like a mosaic. It need not be said what an economy of money and time this curious rediscovery and perfection of an ancient art effects.

Since marble is now so largely used in decoration, this process renders any decorative scheme possible, tints being matched to order. The permanence of the tint is beyond peradventure, since, if it is not destroyed by the nitric acid used in polishing, it may be expected to defy lesser ravages of time and wear. The color is layed on the marble in the usual way, using the endolithic paints. The marble thus treated is placed in ovens and surrounded by a chemical atmosphere; and by gentle warmth and moisture the tint is made to penetrate the marble as deep as desired. After the color is thus fixed, the marble is polished. There seems to be no limit to the way in which the marble can be used.

Not only imitating fine marbles, and giving to architects and designers a variety of colored marbles known only to the Greeks and Romans, it goes into the realm of painting, and the artist can there perpetuate his work in enduring stone. In ecclesiastical painting endoliths will be largely sought for. Pictures of saints may be now had, that are not only artistically beautiful, but as durable and indestructible as the walls of the church they may be built into, as well as altars, baptismal-fonts and holy-water stoups, which can be made of the richest and rarest marbles, or combinations of the same, while vestibules, aisles and sanctuary floors can be covered, not only with beautifully colored marbles, but can also be worked into beautiful designs.

The value, beauty and variety of the material can only be understood by seeing it. The principal work in the West is that used in the remodeling of the Plankinton House, Milwaukee, but the handsome offices in

charge of William H. MacHarg, in the Commercial Bank building, Chicago, display many handsome and convincing samples showing many of the possibilities of endolithic marble work. Architects visiting the convention are cordially invited by Mr. MacHarg to call, an invitation that should be accepted by every architect who is interested in the artistic progress of the age, for aside from its vast practical utility, this is almost the one decorative material that will appeal to his artistic feelings, and at the same time awaken his enthusiasm, because of its almost limitless adaptability.

Mosaics.

THE Georgia Marble Company, Chicago, has removed to 103 Dearborn street, where they have fitted up handsome offices and present a beautiful variety of their product.

THE Smith & Egge Company are making to order an admirably balanced steel pinioned pulley, to be used with No. 1 Giant metal chain, in the new Marshall Field warehouse.

A NEW composition for plastering walls is being introduced. It is of the nature of cement, and takes the place of mortar and hair plaster, and has among other properties that of drying quickly and becoming very hard, hence its name, adamant. It is claimed that it does not crack and is not injured by leaky roofs or bursted waterpipes. It is introduced by A. W. Curtis, at present located at 15 Washington street.

THE Hawley laundry dryer and conveyor has become very popular, and is being placed in many of the finest residences in this city. Contracts are now in hand for one to be put into Mr. N. B. Ream's residence, 1901 Prairie avenue; one for Mr. C. W. Brega, Michigan avenue, near Twenty-ninth street, and for Mr. N. S. Jones, Lakeshore drive and Bellevue place. Mr. E. B. Sheldon's three houses on Ontario and St. Clair streets, are also furnished with these dryers.

ONE of the most attractive places for the visiting architect during the convention, and of which he will make a special note in his list of places he desires to see at that time, is the display of gas fixtures at the Archer & Pancoast western headquarters, 250 Wabash avenue. The manager, Mr. Willard, has arranged, in heavily-draped, brilliantly-lighted apartments, probably the largest and most varied display of the finest metal work this country possesses, and no architect should fail to visit, and make note for future use, this superb exhibit of the metal-workers' art. Every grade of price is represented, but each fixture is stamped with the true artists' conception of fitness and true design, the best artists in metal being employed in their manufacture.

BEGINNING Sunday, October 31, 1886, a *New Fast Line* to St. Paul and Minneapolis will be opened from Chicago, Peoria and St. Louis, via the "Burlington Route"—Chicago, Burlington & Quincy Railroad—in connection with the newly completed Chicago, Burlington & Northern Railroad. Over it a double service of through trains will be run, making as fast time as is made over any other line between the same points. The new and elegant equipment composing these trains, which was constructed especially for service on this new line, will include Pullman sleepers, "Burlington Route" dining cars, and comfortable passenger coaches. From both Chicago and St. Louis through coaches, dining cars and sleeping cars will be run; and from Peoria, through coaches, connecting at Rio with the through equipment from St. Louis. For tickets, rates and general information concerning the "new fast line" to St. Paul and Minneapolis, via the Burlington Route, call on or address any railroad ticket agent, or Paul Morton, G. P. and T. A., C. B. & Q. R. R., Chicago.

THE cosiness of a grate fire is becoming every day more appreciated as the fall days approach those of winter, and the attention of those building, or about to build, or contemplating repairs, is naturally divided to the proper selection of fireplaces, mantels, grates and their accessories. The architects who visit Chicago in attendance upon the convention of the Western Association will be expected to return home with well defined ideas upon the latest and best in mantels and grates and artistic tiling. Anticipating this, The Henry Dibblee Company, of 266 and 268 Wabash avenue, have issued a general invitation to architects to visit their exhibit of these materials. As will be seen by their advertisement on last page of cover their display completely covers this important item in house furnishing. Their wood mantels show true artistic and architectural ability in design, and in their tasteful finish, either in plain or elaborate work, the accomplished workman is recognized. Well worth more than a cursory inspection is the department devoted to Lowe tiles. At the first glance one observes the expression of unity between plastic tile and carved woods when combined by skillful artists. A mantel facing of concave tile twelve inches square, showing exquisitely modeled flowers and a flight of swallows in full relief is one of the most elaborate, others in flowers, birds, etc., and meanwhile noting the general tendency to large tile occupies the attention of the visitor. For a plain, rich, but inexpensive facing a design composed entirely of geometrical figures is shown. These tile not only surround the grate, but extend to the ceiling, forming a framework for a beveled plate mirror set in antique brass. Other designs, both in wood mantels and in Lowe's tiles, too numerous for mention, show the resources of this house. Nor in this connection should the wrought-iron fireplaces shown here be forgotten, some of the best being designed by Vedder. A new article in artistic metal work is Holling's extension hall and library lamp. These lamps, exquisite in workmanship and covered by large lace shades, are most effective. They rest on tripods four or five feet high, and can be moved to any part of the room, which, with the soft light and artistic appearance, will make their adoption general, especially for library use. In anticipation of visits from architects, The Henry Dibblee Company have purchased D. Appleton's Artistic Houses, a book of photographs of interiors, and the largest work of the kind ever presented in this country, containing, as it does, about eight hundred interiors. Altogether, an hour could not be more profitably spent than in visiting The Henry Dibblee Company's exhibit.

Are you going to New Orleans or Florida? If so, you can go via the Monon Route via Louisville or Cincinnati, and see the Mammoth Cave, Nashville, Blount Springs, Birmingham, Montgomery, Mobile and the Gulf coast for the same money that will take you through the dreary, uninhabited Mississippi swamps; we are confident you cannot select a line to the South enjoying half the advantages that are possessed by the Monon Route and its southern connections. No one should think of going south without visiting the Mammoth Cave, the great natural wonder of this continent. So much has been written of this world famous wonder that it is impossible to say anything new in regard to it. This trip can now be made all rail, as the railroad has just been completed to the cave from our connection below Louisville. From Mobile to New Orleans (141 miles) the ride along the Gulf coast is alone worth the entire cost of the whole trip. When you decide to go south make up your mind to travel over the line that passes through the best country, and gives you the best places to stop over. This is emphatically the Monon Route, in connection with the Louisville and Nashville and the Cincinnati Southern railways, Pullman palace sleepers, palace coaches, double daily trains. The best to Cincinnati, Louisville, New Orleans, or Florida. For full information regarding single round trip rates, call on or address E. O. McCormick, General Northern Passenger Agent Monon Route, 73 Clark street, Chicago, Ill.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, Ill., November 10, 1886. }

Our advices from numerous manufacturing centers up to within a day or two, show an activity in business which ought to be gratifying to every manufacturer and builder. This satisfaction is increased by the fact that although prices are pointing in an upward direction, they have not advanced far enough, and are not likely to advance far enough to intimidate capital or enterprise against entering upon new work during the winter and spring. In a general summary of this character only general conclusions can be drawn, and too much stress cannot be given to trade conditions in particular localities. We have advices from several cities, both east and west, wherein rather gloomy opinions are expressed by builders and architects as to the immediate prospects. From the opinions expressed, it would seem that local enterprise feels that it has gone about as far as it is safe or desirable to go at present. It is waiting to see what will take place elsewhere, what new developments will manifest themselves, and what new impulse will be given. In the larger cities we find a different condition of things; with scarcely an exception, building labor in every branch is busily employed. There is work enough in hand to keep builders busy until December 1. In Boston, New York and Philadelphia there is an abundance of work in hand, and if our advisers there are not mistaken, and we have no reason for believing they are, the winter's work will be far beyond that of any former season. The plumbers' strike in New York appears as though it had entered upon the collapsing stage. Building labor in that city is satisfied with hours and prices. Builders are contemplating large operations next spring. There is an urgent demand for houses, and real estate is in active demand, both in the city and suburban localities. In Philadelphia there is great activity, and quite a number of permits taken out within the past two or three weeks are for blocks of houses to be built during the next sixty days. The city councils of that city have made liberal appropriations for the construction of several school houses. Municipal improvements will absorb liberal appropriations. Coming westward, we find a commendable degree of building activity along all of the trunk lines, and we find that a great deal of activity is contemplated in railroad construction. The iron and steel industries of Pennsylvania are in a very healthy condition. Nails and furnaces are oversold for months. All of the industries are crowded. Throughout Ohio and Indiana the industrial conditions are very favorable, and labor is generally employed ten hours per day, at higher rates of wages, considering the purchasing power of money, than have ruled for some time. The demand for all kinds of building material is naturally slackening up at this time, but we are assured that the small work of the coming three or four months will help to keep up an easy movement in all kinds of building material. The brick yards have generally closed down. The iron mills and nail factories will run full time all winter. The demand for lumber has exceeded the anticipations of many, but prices, though somewhat better than early in the season, are disappointing. The lumber interests are, however, in sight of better conditions, and of more control over prices. The general improvement is strengthening the confidence of investors, manufacturers, merchants, jobbers, and in fact of all who are interested in production and exchange. There are no political issues of vital importance at stake, except those which politicians find it to their interest to magnify. The volume of money is large enough to supply all legitimate demands. The labor question is within sight of settlement. Our architects and builders have reason for congratulation that the present year has brought with it such favorable conditions and satisfactory results, and there is nothing in the present outlook to create any apprehensions as to the permanency of healthful trade and commercial influences at work.

Synopsis of Building News.

Abilene, Kan.—Architect Geo. W. Shaffer reports: Outlook is very favorable. Railroad connections are proposed which, if completed, will no doubt cause a boom next season. For Theo. Mosher, two-story frame, 36 by 49 feet; steam heat, mantels, etc.; cost \$4,500; plans under way. For Shaw & Son, three-story brick building, 44 by 75 feet, tin roof, galvanized iron cornice; cost \$4,000; plans under way. Addition to Methodist Episcopal Church, one-story brick, 20 by 30 feet; cost \$2,000; plans under way.

Aspen, Col.—Architect Fred A. Hale, of Denver, has prepared plans for Messrs. H. P. Cowenhoven & Co., for a two-story brick business building, 100 by 66 feet; white sandstone trimmings, tin and felt roof, ironwork, fireproofing, galvanized iron cornices, skylights, steam heat, electric light, stained glass, closets, hardwood finish, tiling, etc.; first story will be entirely of plate glass and iron; cost \$30,000; building to be completed January 1, 1887; E. F. Halleck Lumber Co., Denver, general contractors; John Rourke, mason; Dean & Ross, carpenters.

Aurora, Ind.—Architects McDonald Bros., of Louisville, Ky., have prepared plans for the city of Aurora for a two-story engine house and jail building, 39 by 41 feet; custome and brick, galvanized iron cornices; cost \$7,370; under way; W. W. McCoy, contractor.

Baltimore, Md.—Davidson & Sons, of Chicago, are the lowest bidders on the marble work for the Baltimore public building. Their bid is \$89,898. The Burlington Marble Company bid \$95,600.

Bozeman, Mont.—In our last "Intermediate News" number we reported that F. G. Draper & Co. were the architects of Mr. Storey's residence, which was a mistake. The above company furnish the hardware only. Mr. Byron Vreeland is the architect.

Birmingham, Ala.—Architects W. S. Smith & Co. report: There is still a boom in the building line which promises no cessation during the winter months. For C. H. Worrell, three-story flat building, 25 by 70 feet, brick, iron front; cost \$5,500; under way; Gabert & Ratliff, builders. For J. W. McConnell, three-story flat building, 25 by 94 feet, brick, iron front; cost \$6,000; under way; Gabert & Ratliff, builders. For E. T. Brownlee, two-story and mansard residence; cost \$4,000; under way. For St Paul's M. E. Society, frame church building, 40 by 70 feet; cost \$13,000; under way; L. Scully & Co., builders. For H. A. Sharp, two-story frame dwelling; cost \$3,000; under way. For J. Bandman, two-story frame dwelling; cost \$3,000; plans ready for bids. For R. J. Terry, addition to two-story brick store, 25 by 55 feet; cost \$1,800; under way.

Bureau, Ill.—Architect H. Boehme, of Joliet, reports: For A. Burnett, cottage; to cost \$2,000; under way.

Cairo, Ill.—Architect L. D. Bayley reports: For E. A. Smith, two-story and basement frame dwelling, 24 by 46 feet, tin roof, hardwood finish, wood mantels, stained glass, closets and bath, hot air heat ("Henderson" furnace), electric bells etc.; cost \$2,000; will be commenced soon.

Architects Treat & Foltz, of Chicago, have prepared plans for an Episcopal Church, 40 by 100 feet, to be built of stone, slate roof, galvanized iron cornice, stained glass, hot air heat; cost \$15,000; work being done by the day; M. F. Gilbert, H. H. Candell and Rev. F. P. Davenport, building committee.

Cherryvale, Kan.—Architects W. R. Parsons & Son, of Emporia, report: For W. W. Brown, block of five stores; to cost \$12,000; under way; John S. Huntley, builder.

Cambridge, Ill.—Dr. R. F. Lowry is building a two-story frame dwelling and office, 24 by 44 feet; cost \$3,500; under way; Jno. Banholt, mason; P. M. Kessler, carpenter.

Cassopolis, Mich.—Dr. F. Goodwin has prepared plans for a three-story brick hotel building, 74 by 90 feet, to be commenced April 1, 1887; Dr. Goodwin will buy all the material and superintend the work himself. The following material will be wanted: closets, bath, stained glass, tin or iron roof, freight elevators, tiling, electric bells, speaking tubes, dumb waiters, iron columns, plate glass, stone for sills, shingles, lath, etc., also fifty heating stoves; cost of building, about \$13,000.

Chicago, Ill.—Architect J. J. Flanders reports: A two-story school house, 47 by 125 feet; brick, buff Bedford stone trimmings; to be erected corner of Thirty-fifth and Lincoln streets; Peterson & Delahy, masons.

Architect W. W. Boyington reports: For Judge Drummond, four-story and basement store building, 20 by 160 feet, on Lake street, between Franklin and Market streets; pressed brick with brownstone and terra-cotta trimmings, felt roof, ironwork, steam heat and power, freight elevators, hardwood finish, etc.; cost \$13,000; C. A. Moser, mason; David Coey, carpenter.

Architects Burnham & Root report: For W. C. Turner, on Lake Shore Drive, residence, Pennsylvania mica stone, tile roof, 60 by 80 feet; cost about \$70,000. For Charles Counselman, at Kenwood, residence, Pennsylvania stone, tile roof, 60 by 75 feet; cost about \$60,000. For David K. Hill, on Michigan avenue, residence, Georgia marble, slate roof, 40 by 80 feet; cost about \$50,000. For J. H. Winterbotham, at Woodlawn Park, residence, pressed brick, slate roof, 40 by 70 feet; cost about \$20,000.

Architect George Beaumont reports: For Alex. Bell, three-story store and flat building, 58 by 70 feet, corner of Ogden avenue and Paulina streets; Indiana brick, Lemont stone, galvanized iron cornice, felt roof, skylights, ironwork, stained glass, closets, bath, marble mantels, electric bells, etc.; cost \$15,000; under way; Thos. Keating, mason; Dearborn Foundry Company, ironwork; Young & Farrel, stone.

Architects Miller & Thain report: For D. E. Sibley grain elevator, 45 by 100 feet, corner of Thirty-first street and Stewart avenue; it will be covered with corrugated iron; capacity, 175,000 bushels; Wm. Hyink, mason.

Architects Rae & Wheelock report: For W. O. Parker, five brick and frame dwellings, at Park Manor; contracts will include hardwood finish, tiling, wood mantels, electric bells, speaking tubes, closets, bath, stained glass and skylights; cost \$17,500; to be commenced at once. For M. O'Rourke, a three-story hotel, 53 by 183 feet, at South Chicago; passenger elevator, steam heat; cost \$10,000; to be commenced this fall. For J. A. Burhans, alterations, etc.; cost \$5,000; M. St. John, carpenter.

Architect A. J. York reports: For McNeil Bros., five-story warehouse, 178 by 99 feet, at 240 to 254 Jackson street; cost \$120,000; under way; L. J. Daegling, mason; R. W. Gronow, carpenter. For Mr. Baldwin, three-story store and flat building, 61 by 55 feet, on Van Buren street, near Winchester avenue; Anderson pressed brick, brownstone trimmings; cost \$14,000. Also preparing plans for a hotel building, to be built of pressed brick and brownstone, on the West Side; cost about \$40,000.

Architect C. M. Palmer reports: For H. J. Welling, four-story store and flat building, 68 by 109 feet, Chicago avenue and State street, Indiana pressed brick, brownstone trimmings, galvanized iron cornice, felt roof, iron columns, beams, etc., skylights, freight elevator, closets, bath, wood mantels, bells and speaking tubes; cost \$30,000; under way; Kendall Bros., carpenters; R. E. Morse, mason.

Architects Ostling & Bourgeois report: For Anderson & Peterson, three-story and basement double house, 44 by 48 feet, 114-116 Oak street, brick, stone and terra-cotta trimmings, galvanized iron cornices, felt roof, skylights, closets and bath, stained glass, marble mantels, electric bells, etc.; cost \$11,000; under way; Woodstrom & Erickson, masons; M. Reed, carpenter. For C. J. Blomstrom, four-story and cellar flats, 25 by 50 feet, 177 Oak street, brick, stone and terra-cotta trimmings, galvanized iron cornices, felt roof, skylights, closets and bath, stained glass, marble mantels, electric bells, etc.; cost \$8,500; under way; Lindgren & Nelson, masons; Lundgren & Bush, carpenters. For G. Peterson, three-story and cellar flats, 44 by 60 feet, on Racine, near Wrightwood avenue, brick, stone and terra-cotta trimmings, galvanized iron cornice, felt roof, closets and bath, stained glass, marble mantels, electric bells, etc.; cost \$14,000; contracts not let.

Architect Julius Speyer reports: For Donohue & Henneberry, six-story business block, 200 by 72 feet, on Dearborn street and Third avenue, St. Louis pressed brick, granite and brownstone trimmings; cost \$120,000.

Architects Schaub & Berlin report: For H. N. Loomis, two-story and basement and attic residence, 25 by 70 feet, Michigan avenue and Thirty-fourth street, rock-faced brownstone, with blue Bedford stone trimmings, copper cornices, skylights, hardwood finish and tiling, mantels, closets, bath, steam or furnace heat, stained glass, electric bells, dumb waiters, etc.; cost \$10,000. For Albert Leon, three-story and basement and attic store and flats, 25 by 82 feet, 824 Milwaukee avenue. St. Louis pressed brick, brownstone trimmings, galvanized iron cornices, iron channels, beams, etc., closets, bath, skylights, stained glass, mantels, electric bells, speaking tubes, etc.; cost \$10,000; under way; Charles Wagner, mason; F. Koepke, carpenter. For Adam Ochs, two-story residence, 30 by 60 feet, Anderson pressed brick, brownstone trimmings; cost \$10,000.

Architects Rae & Wheelock report: For J. A. Burhans, alterations, etc.; cost \$5,000; St. John, carpenter. For Charles Morrison, residence on Ellis avenue, near Fortieth street, rock-faced blue Bedfordstone front, galvanized iron cornices, iron channels, beams, etc., fireproof, skylights, closets, bath, stained glass, hardwood finish and tiling, mantels, steam heat, electric bells, speaking tubes, dumb waiters, conservatory, etc.; cost \$40,000; under way; Wm. Zulesdorf, mason; Philip & Jackson, carpenters. For A. E. Tyler, alterations, etc., at Geneva Lake; cost \$5,000.

Architect H. F. Starbuck reports: For J. S. Belden, two-story residence, 37 by 70 feet, Woodlawn avenue and Forty-seventh street, Marquette stone and brick, red slate trimmings, galvanized iron cornices, hardwood finish and tiling, mantels, dumb waiters, hot water heat, closets, bath, stained glass, electric bells, speaking tubes, etc.; cost \$15,000; roof on; Adams & Williams, masons, F. N. Chelins, carpenter.

Architect John T. Long reports: For Town of Lake, two-story school house, 65 by 116 feet, on Seventieth street, brick, limestone trimmings; cost \$25,000; T. A. Westberg, contractor. For same, two-story school house, 45 by 60 feet, on Eighty-fifth street, common brick, limestone trimmings; cost \$10,000; E. W. Sproul, mason, H. T. Quintell, carpenter. For E. S. Rice, one-story brick powder magazine, 65 by 150 feet, located four miles southwest of Blue Island, on C. R. I. & P. R. R., to be built of brick and roofed with iron; cost \$10,000; Alfred Wenberger, mason, John H. Gray, carpenter. For F. S. Moore, two-story frame dwelling, 40 by 60 feet, Sixty-seventh and Harvard streets, Normal Park; cost \$6,000.

Architect Otto H. Matz reports: For Chicago Drug & Chemical Co., remodeling and fitting up two stone-front buildings, 52 and 54 Franklin street; cost \$10,000. For A. Buset, stores and flats, 50 feet on N. Clark street, brick, stone trimmings; cost \$12,000.

Architects Furst & Rudolph have prepared plans for Naper Bros. for two two-story dwellings, 46 by 50 feet, at 55 and 57 Delaware place, St. Louis pressed brick, brownstone trimmings; cost \$12,000. For C. Froess, three-story dwelling, 23 by 34 feet, at 234 Webster avenue, St. Louis pressed brick, brownstone trimmings; cost \$5,000; G. Eberlein, mason; J. G. Lobstein, carpenter.

Architect C. M. Palmer has prepared plans for J. F. Barney for a three-story flat building, 38 by 40 feet, at 171 and 173 Twenty-first street; cost \$3,000; Barney & Rodatz, masons; H. H. Roberts, carpenter.

Architect E. E. Snyder reports: For Henry D. Nicholls, three-story stores and flats, 48 by 70 feet, at 456 and 458 Ogden avenue, Ohio Amherst stone, Lake Superior brownstone trimmings; cost \$14,000; O'Donnell & Ormsby, masons; Brown & Linquist, carpenters.

Architect John Otter reports: For Geo. Wilson, two-story livery stable with flats above, 50 by 120 feet, on Center street, Indiana brick, Lemont stone trimmings; taking figures. For A. Burton, three-story store and flat, 28 by 83 feet, on Chicago avenue, near Larabee street, Anderson pressed brick, Lemont stone; cost \$9,000; M. J. Benson, mason; C. E. Carson, carpenter. For J. L. Fosse, three-story flats, 22 by 53 feet, at 135 Hudson street, Anderson pressed brick, Lemont stone; cost \$7,000; under way; A. Almert, mason; J. Larson, carpenter.

Architect H. R. Wilson reports: For F. Kachler, stores and flats, at 684 W. Division street, two stories, 32 by 80 feet, Anderson pressed brick, portage stone trimming; cost \$6,000; C. W. Boyington, mason. For Geo. W. Parke, dwelling, on Monroe, near Leavitt street, two stories, 30 by 60 feet, St. Louis pressed brick, trimmed with brownstone; cost \$10,000.

Architects Jenney & Otis report: A dwelling on lake shore drive, two stories, 50 by 70 feet, granite; cost \$35,000; Mortimer & Tapper, masons.

Architect Fred Ahleschlager reports: For M. Englehardt, at 3150 S. Park avenue, two three-story dwellings, 42 by 75 feet, stone fronts; cost \$21,000; Daegling & Tarmulder, masons.

Architect Fred Kelterich reports: For Thos. Mathews, dwelling, two stories and basement on Albany avenue and Madison street, Trenton pressed brick, on Albany avenue front, Indiana pressed, on Madison street front, ornamental brick and cutstone trimming, galvanized iron furnace, mantels, grates, and stained glass, will be used; cost about \$4,000. For A. Campbell, brick cottage, one story and attic, pressed brick, cutstone, and ornamental brick trimmings, plate and stained glass, mantel, grate, etc.; cost \$1,800. For Geo. Brangart, residence on Belmont avenue, Lakeview, frame, two stories and basement, gable roof; cost \$1,400. For John Welch, store and flat building, pressed brick, cutstone trimmings, galvanized ironwork, flat roof; cost \$3,000. For Mr. Lovejoy, flats, Indiana pressed brick, tuck-pointed cutstone trimmings, cement floor in basement, plate and stained glass, mantels, grates, etc.; cost \$13,000.

Cincinnati, O.—Reported by Mr. L. Mendenhall. As the season advances, or more properly, draws to a close, the gleanings of architectural news becomes more or less an arduous task. In my rounds of the architects' offices, I find rather an uncertain feeling existing as to the outlook for spring trade, strikes and labor combinations being the bugbears and disturbing forces. However, let us not cross the bridge until we come to it, but put on a bold front and meet them, should they come, with a firm backbone, and a generous spirit. Our citizens are very excited over rapid transit, and if all the plans are carried out, a great boom in suburban building, depending, of course, upon the above condition, will surely be the result. The beautiful bank building is rapidly nearing completion, and has proved an "open sesame" to its architect, who has had his time fully occupied in the preparation of plans ever since he opened his office. The

Ætna Insurance Company's building is progressing favorably, and will prove quite an architectural addition to our fast improving city. The Presbyterians of Pine Hill have accepted A. C. Nash's plans for a church, and ground has been broken. Ground has been broken for the Hamilton County Morgue, a much needed improvement. Mr. Samuel Hannaford is busy with plans, the latest being the Childrens' Hospital, which will be complete in every detail. Mr. E. Anderson has well considered the knotty problems of light and space, and the economical expenditure of money in an apartment house for Miss Sarah Gillespie. The improvements and additions to Longview Asylum are progressing favorably under the supervision of Architect Gustave Drach.

Architect Chas. Crapsey has prepared plans for an exceedingly beautiful office building, eight stories, of brownstone, size 36 by 100; cost \$50,000.

Architects Buddemeyer, Plympton & Trowbridge report: Drawings have been prepared for rebuilding Mr. J. B. Sellow's residence, Avondale, burned down; cost \$4,500. For H. T. Duke, Mt. Auburn, ten-room Queen Anne, cement house; cost \$4,500. For Jas. V. Sweetser, Marion, Ind., stone, cement and half timber residence, twelve rooms, slate or tile roof; cost \$10,000. Prospects for spring work exceedingly good, with the anticipation of a rushing building season generally.

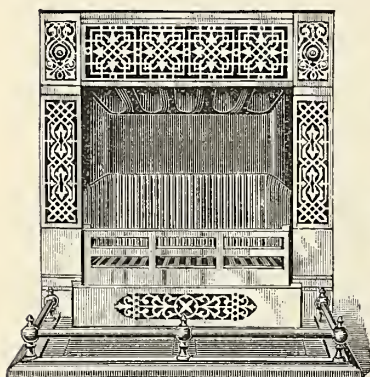
Architect Samuel Hannaford, Esq. reports: A seven-story stone front store, 44 by 72 feet, with tin roof, for Gen. Louis Seasongood. For Mr. J. Wilhelmy, a brick stable, two stories high, 40 by 100 feet, capacity forty horses, tin roof. Three dwellings built of brick and stone, containing ten rooms each, with slate roof, for Robert Mayer.

Cimarron, Kan.—Architects W. R. Parsons & Son, of Emporia, report: For School Board, school house, to cost \$8,000; under way; John Anderson, builder.

Dayton, Ohio.—Architect Chas. I. Williams reports: For Chas. T. Freeman, alterations and additions to residence; cost \$2,500; brick stable, \$1,500; under way; O. L. Bouck, carpenter. For S. J. Patterson, two and one-half-story brick store and dwelling, 33 by 100 feet; cost \$4,500; under way; Phil Rudy, carpenter. For J. P. Wolf, two and one-half-story pressed brick residence, 46 by 80 feet; cost \$20,000; under way; P. E. Gilbert, carpenter. For same, two-story brick stable, 35 by 35 feet; cost \$2,000; under way; H. B. Sortman, carpenter. For I. L. Baker, two and one-half-story brick residence, 33 by 85 feet; cost \$15,000; under way; John Rouzer & Co., carpenters. For Christ Eidleman, two and one-half-story brick residence and stable; cost \$8,000; under way; O. L. Bouck, carpenter. For G. M. Fair, two-story brick residence, 22 by 66 feet; cost \$3,000; under way; Z. E. Hersh, carpenter. For Board of Education, two-story brick school house, 40 by 80 feet; cost \$9,000; under way; Z. E. Hersh, carpenter. For Jas. Ritty, three and one-half-story stone business block with flats above, 50 by 100 feet; cost \$13,000; projected; contracts not let. For the United Brethren Publishing House, four-story pressed brick business block, 60 by 140 feet; cost \$16,000; under way; Jacob Smith, carpenter. For August Whitgar, bar-room fixtures, the "Mikado," Jap. design; cost \$2,500; under way; John Ronzer & Co., carpenters. For Herman Frank, bar-room fixtures; cost \$2,000; under way; M. Ohmer's Sons, carpenters. For A. Zidler, storeroom; cost \$3,600; under way; Ronzer & Co., carpenters. For Chas. Horne, two-story brick dwelling, 30 by 56 feet; cost \$3,000; projected. For Scott McDonald, two-story frame dwelling, 28 by 48 feet; cost \$2,400; projected. For Wm. Arnold, two and one-half-story pressed brick dwelling, 45 by 78 feet; cost \$1,200; projected. For John Dietz, three-story pressed brick business block, 81 by 110 feet; cost \$11,000; under way; Henry Prinz, carpenter. For H. Hollencamp, two-story double brick dwelling, 34 by 60 feet; cost \$4,000; Albert Berry, carpenter. For Jacob Wolf, two and one-half-story pressed brick dwelling; cost \$9,000; under way; O. L. Bouck, carpenter. For Y. M. C. A., D. A. Sinclair, secretary, four and

(Continued on page xiv.)

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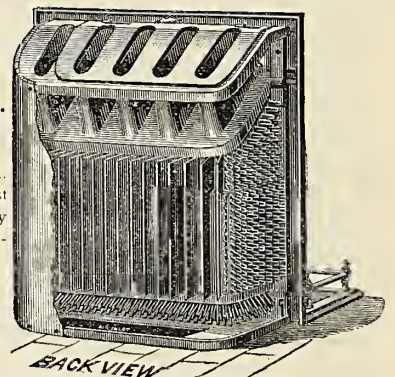
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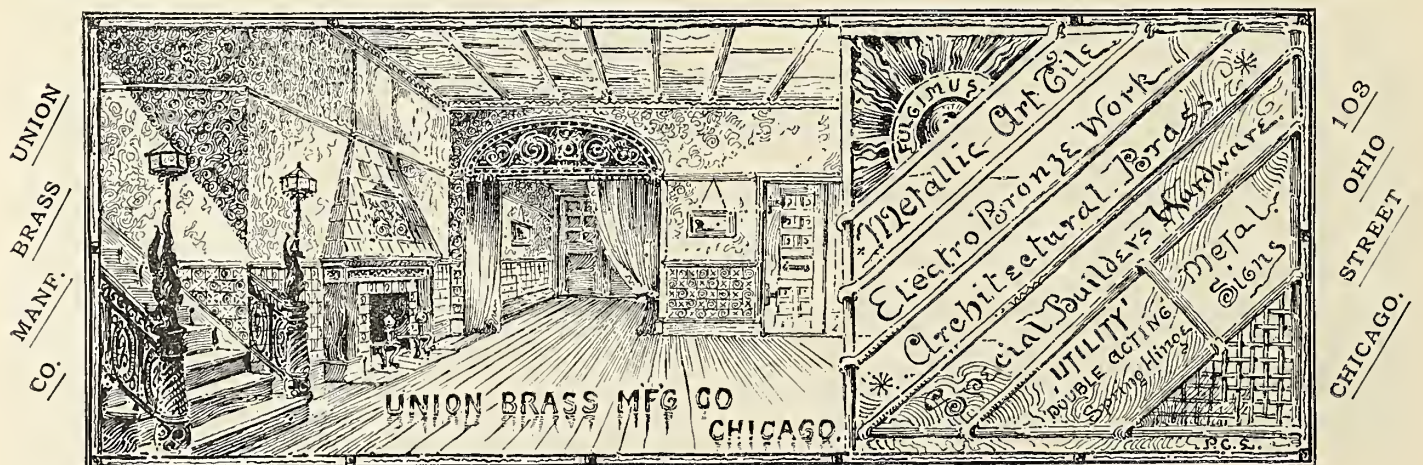
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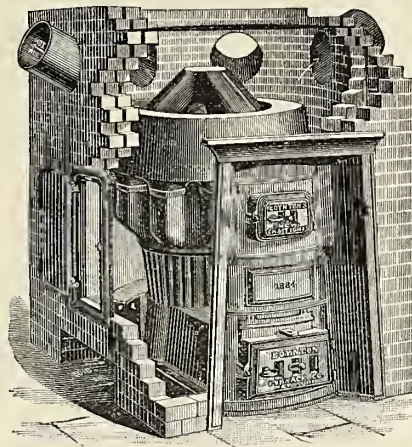
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(Continued from page 58.)

one-half-story building, 66 by 200 feet, rock-face Mansfield variegated sandstone, trimmed with brownstone, swimming bath, 25 by 50 feet, gymnasium, 53 by 60 feet, association hall, seating 800 persons; cost \$70,000; under way; B. N. Beaver, carpenter. For Arnold & Son, two-story brick dwelling, 28 by 52 feet; cost \$3,200; under way; P. E. Gilbert, carpenter. For Adam Schautz, three-story brick stores and flats, 38 by 120 feet; cost \$6,600; under way; Kramer & Co., Carpenters. For Joseph Needles, two-story brick dwelling; cost \$3,375; under way; P. E. Gilbert, carpenter. For W. H. Simms, three-story brick residence, 54 by 68 feet, greenstone, with brownstone trimmings; cost \$30,000; under way; M. Ohmer's Sons, carpenters. For R. I. Cummin, two and one-half-story residence, 48 by 68 feet, stone, first story, timber and cement above; cost \$4,500; nearly completed; Pierce & Coleman, and Ronzer & Co., contractors. For H. V. Lytle, two and one-half-story frame residence, 42 by 64 feet, redwood, shingles, etc.; cost \$8,000; nearly completed; O. L. Bouck, carpenter. For Jno. Pfium, two-story brick store, 30 by 110 feet; cost \$4,000; nearly completed; O. L. Bouck, carpenter. For Church of the Sacred Heart, stone building, 75 by 115 feet; cost \$50,000; projected.

Davenport, Iowa.—Architect J. W. Ross reports: Preparing plans for J. S. Wille for a frame residence with all modern improvements; cost about \$10,000.

Donnellson, Ill.—Architect Joseph Otter has prepared plans and has now under way a one-story frame church, 32 by 50 feet, for the M. E. Society; cost \$1,500; John Hampton, mason; Joseph Otter, carpenter; seating is not yet contracted for.

Dubuque, Iowa.—C. W. Robison, secretary, reports that the club house for the Commercial Club will not be started until next May.

Architect F. D. Hyde reports: For Bishop Hennessey, block of three two-story and attic brick residences, 65 by 50 feet; cost \$8,000; under way. For Sisters of Mercy, asylum for the insane, two wards, each one story and basement, 30 by 90 feet, two-story and attic and basement administration building, 40 by 40 feet; making plans; cost not estimated.

Eatonton, Ga.—Architects Bruce & Morgan, of Atlanta, have prepared plans for Robert Young, president Hotel Co., for a two-story hotel building, 117 by 84 feet, brick basement and two stories frame; contracts include stained glass, tin roof, wood mantels, tiling, electric bells, speaking tubes, etc.; cost \$9,500; under way; C. D. Leonard, general contractor; E. F. Elliott, mason; B. S. Dallas, carpenter; to be completed by March 1, 1887.

Fargo, Dak.—Architect Geo. Hancock reports: There is a decided improvement in the outlook for building in the near future. A great many small jobs are being done all over north Dakota. Have under way at present a church at Lisbon, also one at Pembina, reported elsewhere in this issue.

Franklin, Ohio.—Architect Chas. I. Williams, of Dayton, reports: For First Presbyterian Church, frame parsonage; cost \$2,400; under way. For Jas. Guernsey, three-story pressed brick business block and Knights of Pythias hall, 50 by 90 feet; cost \$12,000; under way; J. C. Davis & Bro., of Dayton, carpenters.

Fredonia, Kan.—Architects W. R. Parsons & Son, of Emporia, report: For M. Abernethy, residence, to cost \$4,000; under way; John S. Huntley, builder.

Galveston, Tex.—Architect N. J. Clayton reports: For Texas Star Flour Mills, M. Reymerschoffer, president; N. J. Clayton, consulting architect; flour mills to cost \$100,000; under way. For Geo. Seeligson, two-story frame residence, slate roof; cost \$20,000; projected. For R. V. Davidson, two-story frame residence, slate roof; cost \$7,000; under way. For Mr. Selkirk, two-story frame residence, slate roof; cost \$7,000; projected. For Mr. C. Fox, two-story frame residence, slate roof; cost \$7,000; projected. For Mr. Jos. Franklin, addition to residence; cost \$830. Addition to residence of J. W. Byrnes; cost \$830; projected.

Great Bend, Kan.—Architects W. R. Parsons & Son, of Emporia, report: For Congregational school, college building, to cost \$25,000; under way; John Anderson, builder. For Presbyterian Society, church building, to cost \$15,000; Morrison Bros., builders. For D. N. Heizer, store building; cost \$6,000; under way; Morrison Bros., builders. For D. N. Heizer, plans prepared for a residence, to cost \$3,000.

Greenville, Pa.—Architects Kanengeiser & Kling, of Youngstown, Ohio, report: For Shenango Valley Cemetery, receiving vault to cost \$2,000. For Dr. M. L. McFlhaney, brick residence; cost \$5,000. For Samuel Cochran, frame residence; cost \$7,000.

Hamilton, Ohio.—Architects G. & A. Brink, of Cincinnati, have prepared plans for J. C. Tarrant for a four-story brick building, 24 by 76 feet, stone trimmings, galvanized iron cornices, tin and iron roof, iron work, passenger and freight elevators, steam heat and power, closets, electric bells, etc., electric light; building under way; Collins & Hill, masons; V. Barker, carpenter.

Hog Island, Va.—Architect Chas. I. Williams, of Dayton, Ohio, reports: For Ed. Barney, granite and shingle summer residence; cost \$25,000, projected.

Holton, Kan.—Architects W. R. Parsons & Son, of Topeka report: For the Board of Education, school house, to cost \$10,000; under way; J. D. Bricher, builder.

Howard, Kan.—Architects W. R. Parsons & Son, of Emporia, report: For School Board, school house, to cost \$7,000; under way; Sullivan & Steinmetz, builders. For Wm. Bruce, residence, to cost \$3,000; preparing plans.

Mayon, Dak.—Architect H. J. Bingham, formerly of Mitchell, has located here, and reports the following: Building is about completed for this season, with good prospects for next year. Have at present six frame cottages under way, ranging in cost from \$1,000 to \$2,000, and aggregating \$9,365.

Joliet, Ill.—Architect H. Boehme reports: For John Lennon, remodeling residence; cost \$2,500; under way; P. R. Bannon, contractor. For a benevolent society hall building; cost \$3,000; contract not let. For E. Curtis, cottage; cost \$2,000; under way; D. E. Winters, builder. For M. Juocy, three cottages, to cost \$3,000; under way; D. E. Winters, builder. H. R. Russell, residence, to cost \$3,500; under way; H. R. Burlingame, builder.

Jonesboro, Ark.—G. W. Culberhouse & Co. are erecting a two-story business building, 30 by 90 feet; brick, iron front, tin roof, galvanized iron cornice, hardwood finish, steam or hot air heat; cost \$6,000; under way; H. G. Seymour & Bro., general contractors; J. White, mason.

Kansas City, Mo.—Architect F. B. Hamilton, reports: For G. M. Foley, three-story brick building, 22 by 66 feet; cost \$8,000; under way; Sutherland & Oliver, builders. For R. M. Snyder, three-story and basement brick building, 36 by 56 feet; cost \$10,000; taking figures. For Dr. N. N. Horton, two-story addition to residence; cost \$2,500; plans finished.

Kinsman, Ohio.—Architects Kanengeiser & Kling, of Youngstown, Ohio, report: For J. McGranahan, two-story stone and frame residence, 72 by 80 feet.

Lincoln, Neb.—Architect F. B. Hamilton, of Kansas City, Mo., reports: For Eli Plummer, two story residence, slate roof; cost \$7,500; under way; Terhune & Wilson, of Kansas City, builders.

Lynchburg, Va.—Architect E. S. McCrossin has prepared plans for James M. Booker for a three-story fireproof tobacco warehouse, 140 by 110 feet, to be built of stone and brick, tin roof, ironwork, skylights, closets, elevators, etc.; capacity 200,000 pounds tobacco daily; Oglesby & Cunningham, proprietors; cost \$20,000; under way; William H. Ford, mason; John P. Pettyjohn, carpenter.

Larned, Kan.—Architects W. R. Parsons & Son, of Emporia, report: An opera house building, to cost \$20,000; under way; Chappell & McCallister, builders.

Leavenworth, Kan.—Architects Wells & Phelps report: Outlook for next spring is very good, as is also present business. Have the following under way at present: For Mrs. H. C. Prang, frame residence, 32 by 48 feet; cost \$2,700; H. W. Couldrin, builder. For W. H. Farrell, four-story stone and frame store building, 30 by 92 feet; cost \$4,700; E. H. Farrell, builder. For Brandon & Kunrger, three-story brick brewery building, 29 by 75 feet; cost \$2,500; Wm. Schrader, builder. For J. H. Ousley, three-story brick store building, 48 by 80 feet; cost \$6,500; day work. For Thos. Green, three-story frame residence, 40 by 48 feet; cost \$3,800; H. W. Couldrin, builder. For I. Rothenberg, two-story brick residence, 25 by 75 feet; cost \$4,800; M. E. Everett, builder. For G. M. Lee, three-story frame residence, 38 by 58 feet; cost \$5,700; H. O. Neal, builder. The government building, under the supervision of Mr. Wells, is progressing rapidly.

Lisbon, D. T.—Architect Geo. Hancock, of Fargo, reports: For the Episcopalian Society, church building, 25 by 65 feet, to be built of giant boulders, roughly dressed, open timbered roof, stained glass windows; cost \$3,500; just commenced; G. A. Stout, builder.

Little Rock, Ark.—Architect B. J. Bartlett has prepared plans for Louis Reineman for a brick carriage repository, 75 by 140 feet; cost \$6,000. For Dodge & Johnson, brick business block, 60 by 100 feet; cost \$11,000. For Christian Church congregation, brick building; cost \$6,000.

Lockport, Ill.—Architect H. Boehme, of Joliet, reports: For C. Mosher, brick store building, to cost \$4,000; contract not let.

Minneapolis, Minn.—Architect J. M. Wood, of Chicago, Ill., has prepared plans for, and work has commenced on Messrs. Gates Bros.' four-story theater building, 70 by 165 feet, to be built of Milwaukee pressed brick, trimmed with Vert Island stone and terra-cotta, on Hennepin avenue, between Seventh and Eighth streets, contracts will include fireproofing, hardwood finish and tiling, iron roof, iron channels and beams, skylights, stained glass, closets and baths, steam heat and power electric bells, speaking tubes, dumb waiters, electric lights, etc. The building has been leased to Messrs. Sackett & Wiggins, and will be opened about January 1, 1887, under the management of Mr. Frank Percy Weadon. It is the intention of the proprietors to surpass any theater in the West in the way of finish and decoration; cost of building \$150,000.

Mound City, Ill.—Architects E. Jungenfeld & Co., of St. Louis, Mo., have prepared plans for G. F. Meyer for a three-story brick factory building, 50 by 100 feet, building under way; D. D. Harris, general contractor, Henry Stout, mason, Harris & Son, carpenters.

Mt. Vernon, O.—Mayor C. Culbertson reports that the question of building a city prison, etc., has been agitated, but nothing definite yet done regarding the matter.

Milwaukee, Wis.—Architect Wm. Davelaar reports: For E. Dar-ton, two-story double brick dwelling; cost \$8,000. For A. De Long, frame dwelling; cost \$2,500. For James Siddle, double brick dwelling; cost \$7,000. For J. Muller, two frame dwellings; cost \$8,000. For Gen. West, frame dwelling; cost \$6,000. For F. A. Lidston, frame dwelling; cost \$2,000. For H. B. Dewey, frame dwelling; cost \$2,500. For A. L. Kain, three frame houses; cost \$4,000; two-story brick bank building in Oconto; cost \$6,000. For J. McIntyre, frame dwelling; cost \$1,500. For Wm. Van Bimen, frame dwelling and store; cost \$2,500.

Mendon, Ohio.—Architect Charles I. Williams, of Dayton, reports: For Board of Education, two-story brick school house, 28 by 52 feet; cost \$8,000; under way.

New Corporations.—The Ohio Sanitary Company, of Cincinnati; capital stock, \$25,000. Joseph Semple, John A. Dixon, 4 Taft street; Harry H. Golden, John Jones and Wm. T. Cooper, incorporators. A certificate to increase the capital stock of the Pioneer Fireproof Construction Company of Chicago from \$100,000 to \$250,000 was today filed with the Secretary of State. Standard Light and Heat Company, at Chicago; capital stock, \$500,000; incorporators, Harrison J. Baker, Thomas Wanless, E. Beckley Hamlin and John Barton Payne.

Niles, Mich.—Architects Searle & Dougan report: For the city, two-story hose house, 18 by 24 feet, brick veneer, wood cornice; iron roof; cost \$700; under way; Searle & Dougan, contractors.

Norwalk, Ohio.—The county commissioners have submitted the question of building of a jail to a vote of the people at the November election.

Omaha, Neb.—Architects Miller & Thain, of Chicago, Ill., report: For A. R. Souer, two-story frame dwelling, 42 by 60 feet; stone foundation, pointed slate roof, skylights, stained glass, closets and bath, hot air heat, hardwood finish and tiling, electric bells, speaking tubes, wood mantels, etc.; cost \$15,000.

Ogden, Utah.—Architects Van Brunt & Howe, of Boston, Mass., and Kansas City, Mo., have prepared plans for the Union Pacific Railway Company for a three-story stone depot building, 390 by 70 feet: slate roof, galvanized iron cornices, iron channels, beams, etc.; hardwood finish and tiling, fireproofed, skylights, stained glass, closets and bath, passenger and freight elevators, steam heat and power, electric lights, electric bells, speaking tubes, dumb waiters; slate or marble mantels; cost \$135,000.

Pembina, D. T.—Architect Geo. Hancock, of Fargo, reports: For Episcopalian Society, brick veneered church building, 23 by 60 feet; open timbered roof, stained glass windows, etc.; cost \$3,000; under way; R. R. Lea, of Bartlett, builder.

Pittsburg, Kan.—Architects W. R. Parsons & Son, of Emporia, report: For the city hall and jail building; cost \$6,000; under way; Fred Messerman, builder.

Plymouth, Ind.—Architects Purcell & Fry have prepared plans for Rev. E. P. Thompson for a Presbyterian church building, 61 by 70 feet, brick, stone trimmings, slate roof, galvanized cornices, iron channels, beams, etc., hot air heat; cost \$7,000; under way; Daniel Kehler, carpenter; Bristol, mason.

Poplar Bluff, Mo.—Architects Frank & Lisney have prepared plans for I. M. Davidson for a two-story brick building, 24 by 40 feet; tin and felt roof, galvanized iron trimmings; cost \$2,000; under way; Frank & Lisney, masons; J. B. George, carpenter.

Salina, Kan.—Architect F. B. Hamilton, of Kansas City, Mo., reports: For Dr. M. H. Grier, three-story store and office building, 50 by 75 feet; brick, cutstone trimmings; cost \$8,000; W. O. McKinney, contractor.

Sharon, Pa.—Architects Kanengeiser & Kling, of Youngstown, Ohio, report: For Shenango Machine Company, frame foundry building; cost \$5,600.

South Evanston, Ill.—Architect John T. Long, of Chicago, reports: For M. E. Society, one-story church building, 66 by 183 feet, red pressed brick, limestone trimmings; cost \$12,000; under way; Thomas Parnell, contractor.

Sioux City, Iowa.—Architect G. G. Baldwin reports: Everyone is busy this fall, but prospects for winter is poor. For Independent School District, west side school house, 78 by 94 feet; cost \$15,000; projected. For Fred Evans, dwelling, 32 by 32 feet; cost \$3,000; projected; Hawson & Lamb, builders.

Topeka, Kan.—Architect Seymour Davis reports: For N. P. Garretson, two and one-half-story cutstone, pressed brick and frame dwelling, 35 by 50 feet; cost \$5,000. For Professor J. E. Williamson one and one-half-story frame dwelling, 22 by 30 feet; cost \$2,000. For T. E. Pounds, brick, terra-cotta and frame dwelling, 30 by 41 feet; cost \$2,500; plans under way.

Architect John T. Long, of Chicago, Ill., reports: For the C. K. & N. R. R., two-story depot, 64 by 200 feet, limestone and pressed brick; cost \$30,000; also preparing plans for 75 or 80 depot buildings along the line of this road.

Architects W. R. Parsons & Son report: Building season has been good, but prospects for next year are very uncertain, as crops are poor. For Wilson County, court house, 82 by 102 feet; cost \$40,000; under way; J. H. Seeley, builder. For Elk County, court house, 90 by 100 feet; cost \$35,000; under way; J. S. Huntley, builder. For Hodgeman County, court house, 50 by 60 feet; cost \$15,000; under way; Geo. H. Evans, builder. For Elk County, jail and sheriff's residence; cost \$6,000; under way; J. S. Huntley, builder. For Hodgeman County, jail and sheriff's residence; cost \$4,000; under way; Geo. H. Evans, builder.

Urbana, Ohio.—Architect Chas. I. Williams, of Dayton, reports: For Jno. E. Bucher, two-story frame dwelling, 28 by 46 feet; cost \$2,200; under way.

West Manchester, Ohio.—Architect Chas. I. Williams, of Dayton, Ohio, reports: For F. M. Davison, two and one-half-story brick residence, 33 by 68 feet; cost \$9,000; under way; O. L. Bouck, carpenter.

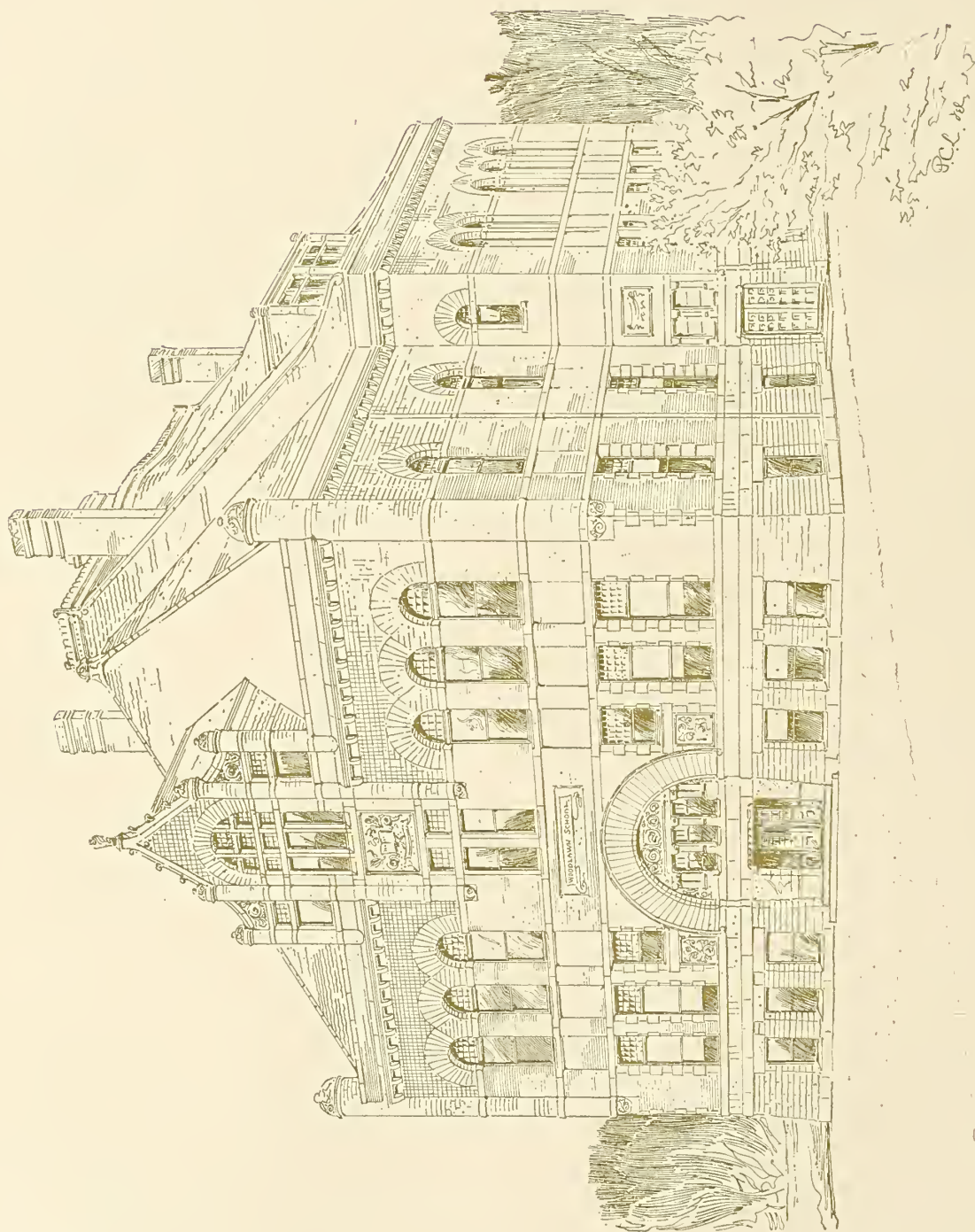
Warren, Ohio.—Kanengeiser & Kling, of Youngstown, report: For William Wallace, brick residence; cost \$16,000. For Dr. O. A. Palmer, frame residence; cost \$6,000.

Wheeler, Pa.—Architects Kanengeiser & Kling, of Youngstown, Ohio, report: For James Madge, frame residence; cost \$2,000.

Winona, Minn.—Messrs. Gates Bros., landlords and builders, of Minneapolis, have been awarded the contract to erect a hotel and opera house in this city, to cost, with sites, \$200,000, for a bonus of \$40,000 cash. Full particulars are not yet made public.

Youngstown, Ohio.—Architects Kanengeiser & Kling, report: For Hon. George F. Arrel, two-story frame residence, 40 by 61 feet, slate roof, wood mantels, hardwood finish and tiling, closets, bath, stained glass, electric bells, speaking tubes, plate glass, etc.; cost \$12,000; under way; Thomas Connell, mason; Wirt & Wirie, carpenters. For St. Columbia church, brick parochial residence; cost \$12,000. For William Anderson, frame residence; cost \$5,000. Frame German Reformed church; cost \$5,000. Frame school house; cost \$3,200. Receiving vault for St. Columbia church cost \$1,600. For Rev. E. Mears, two-story brick building, 45 by 64 feet, slate roof; cost \$12,000; under way; McElhaney & McMaster, builders. For Wm. S. Anderson, two-story frame building, 40 by 52 feet, slate roof; cost \$5,000; under way; Young & Knox, builders. For Evangelical Society, frame church, 36 by 70 feet, slate roof; cost \$6,000; under way; Young & Knox, builders. For Silas Shook, two-story frame, 40 by 56 feet; cost \$6,000; under way; day work.

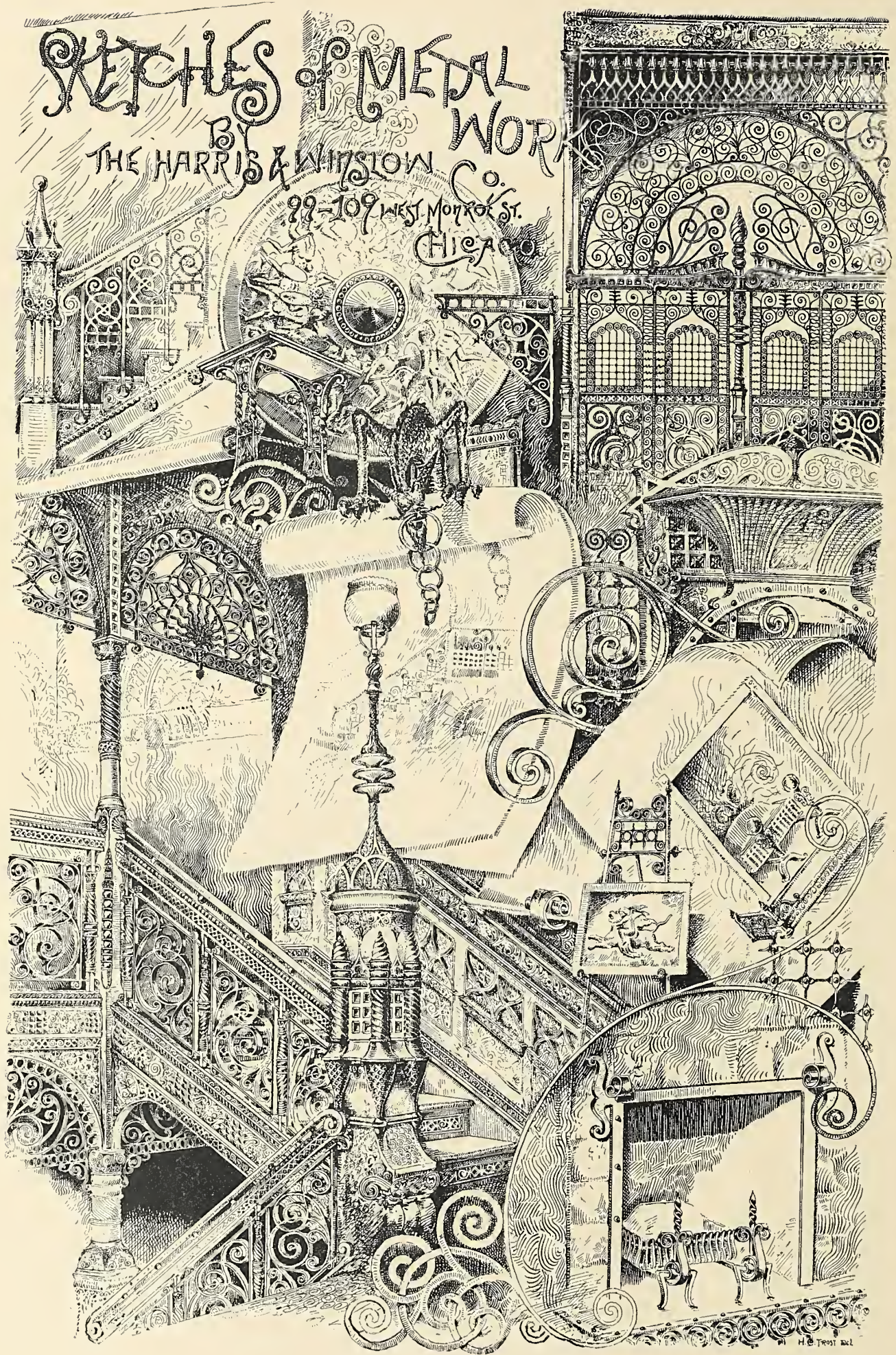




M. L. Beers, Architect.

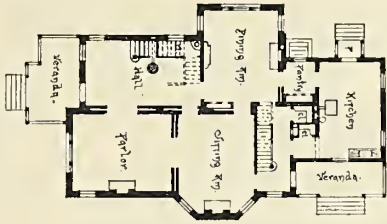
SCHOOL HOUSE, WOODLAWN, ILL.—M. L. BEERS, Architect, Chicago.



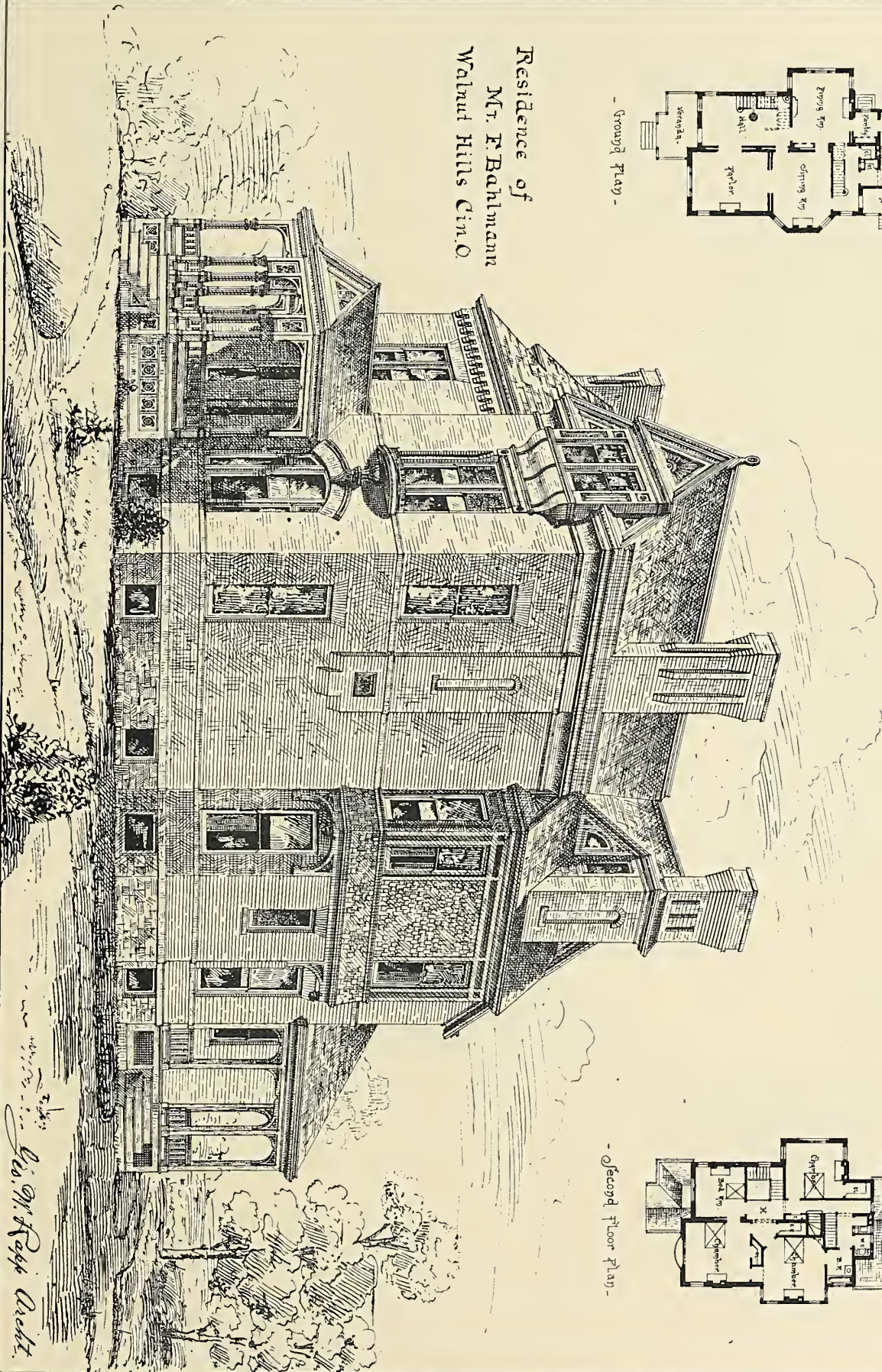
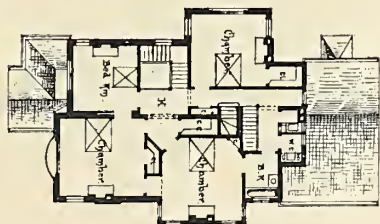


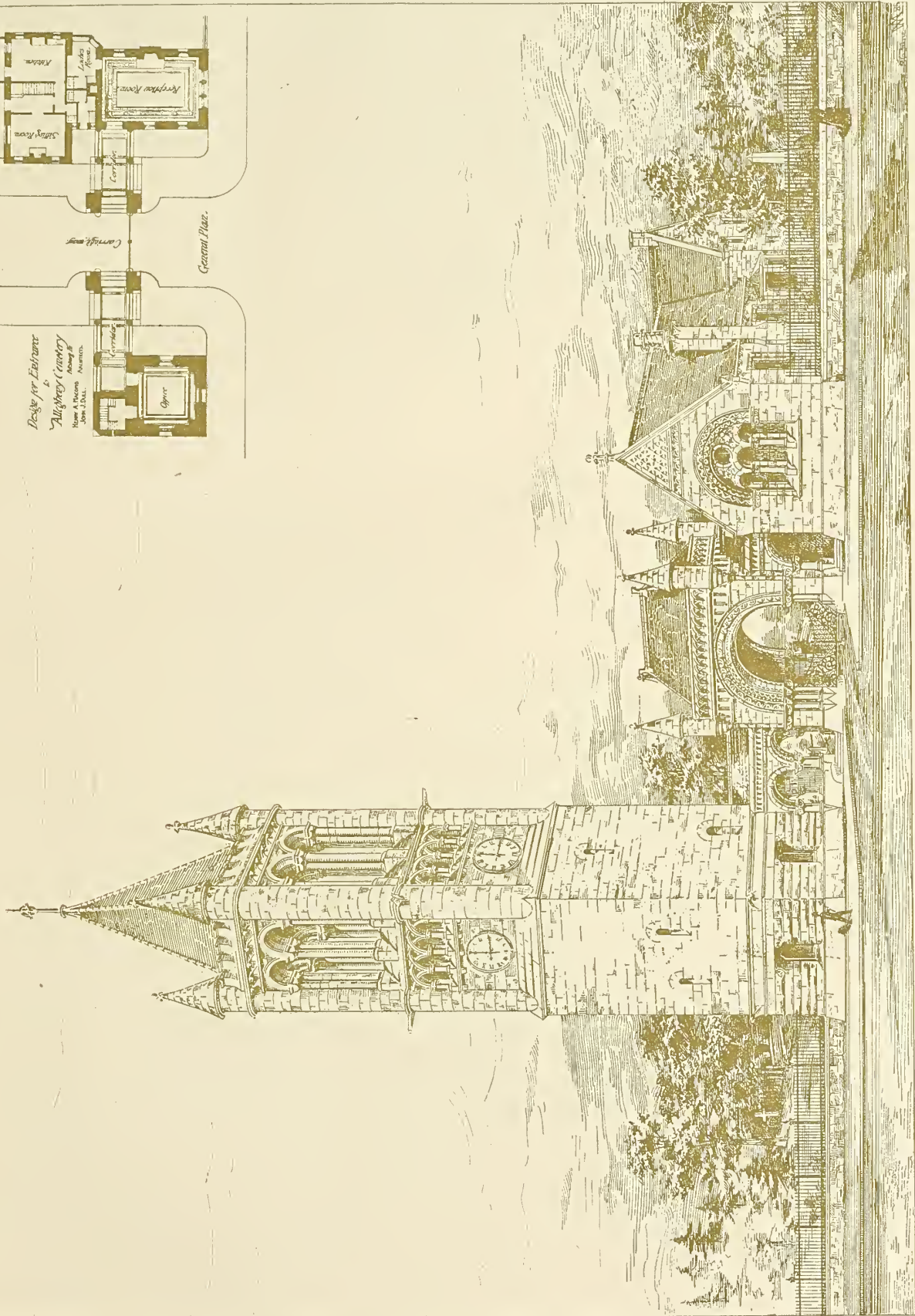
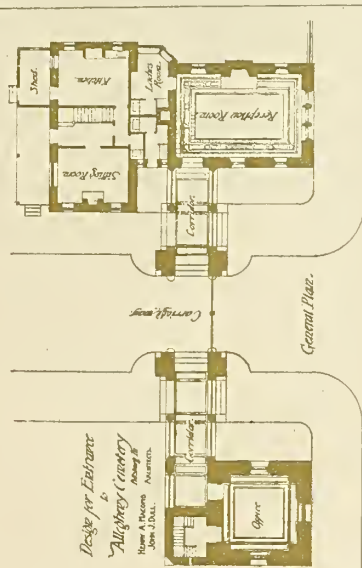
Residence of
Mr. F. Bahlmann
Walnut Hills Cin. O.

- Ground Plan -



- Second Floor Plan -

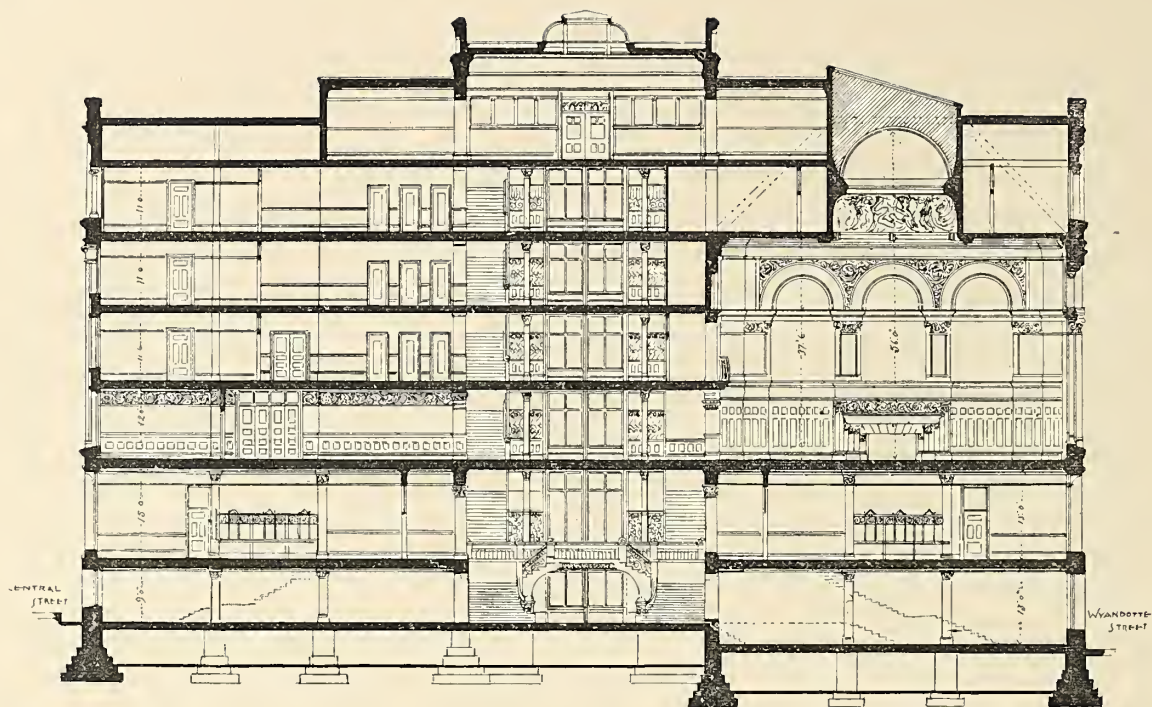




ACCEPTED DESIGN FOR ENTRANCE TO ALLEGHENY CEMETERY, PITTSBURGH, PA.

HENRY A. MACOMB and JOHN J. DULL, Architects, Philadelphia.



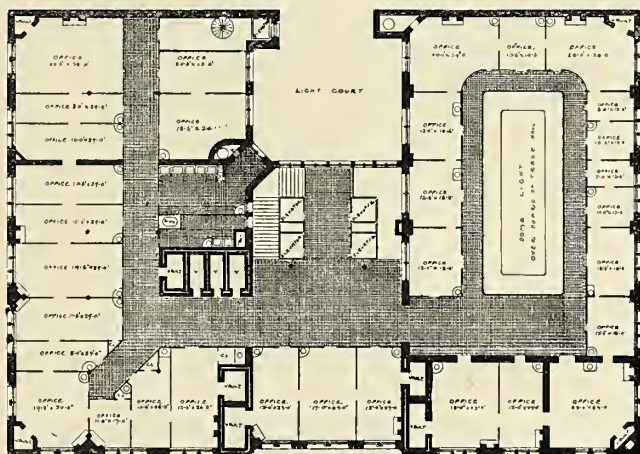
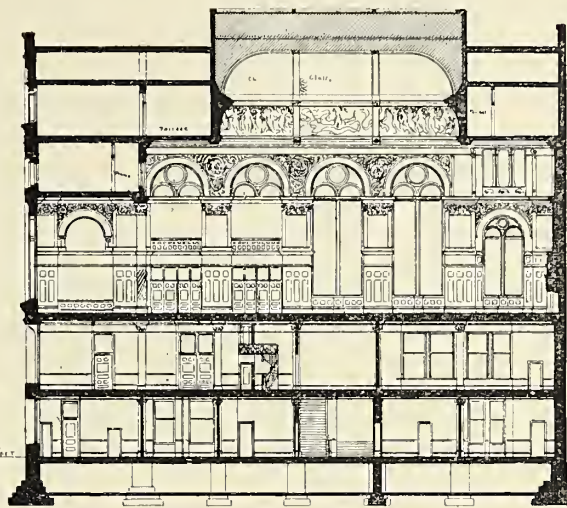
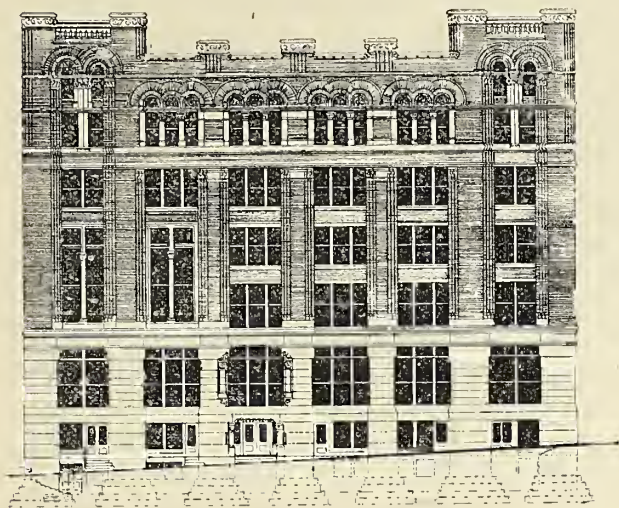


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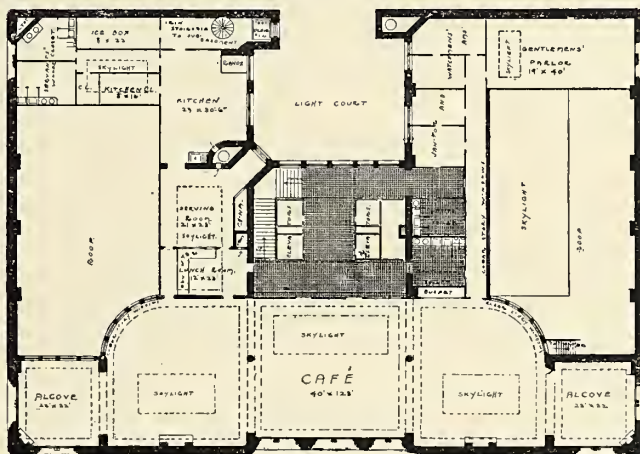
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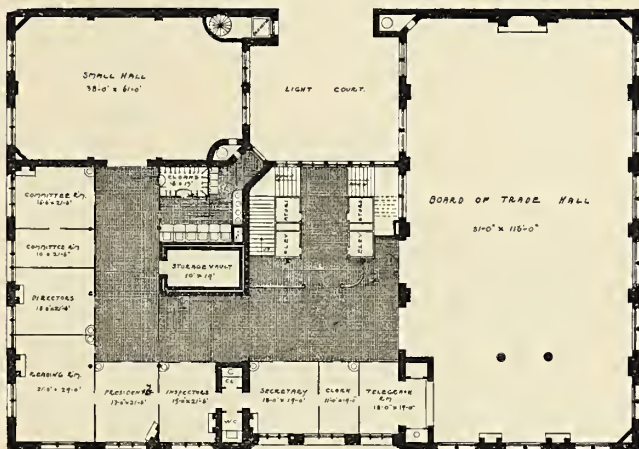
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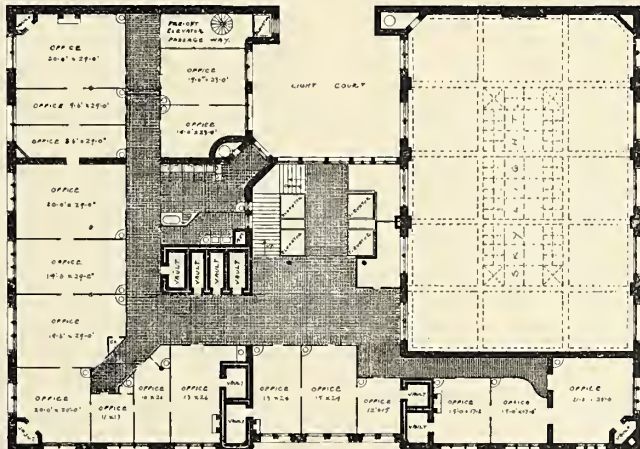
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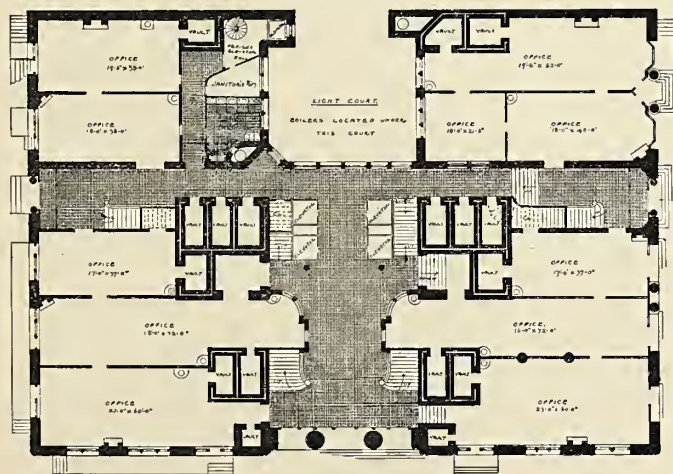
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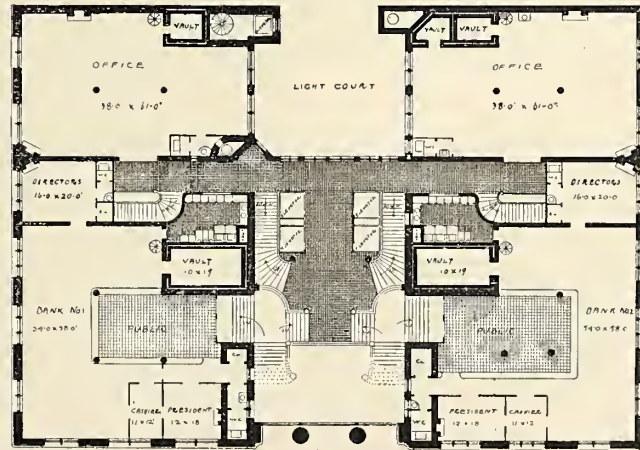
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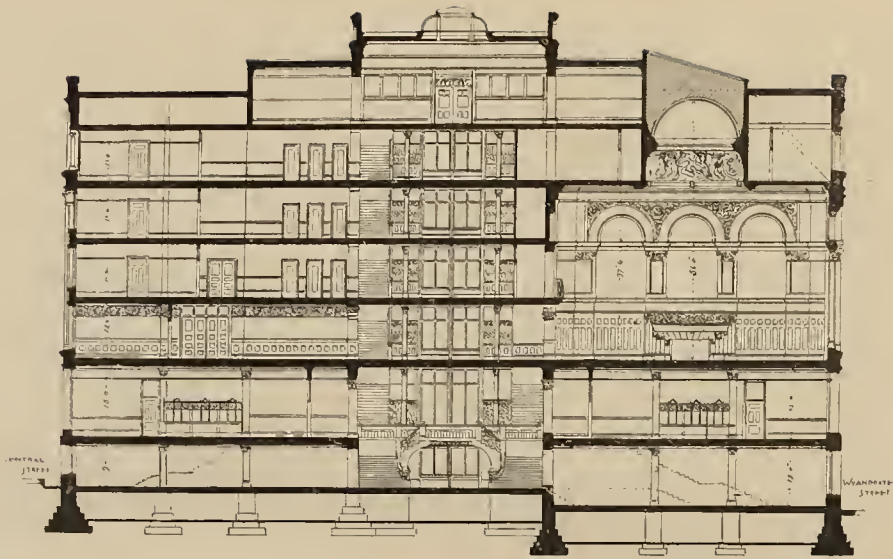
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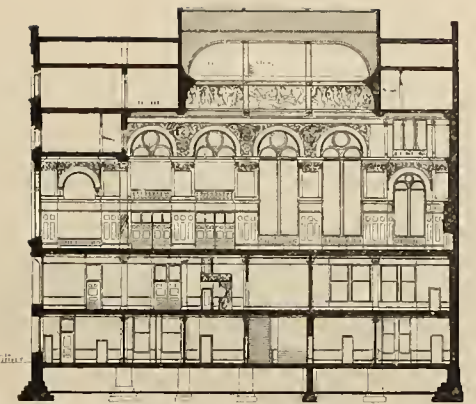


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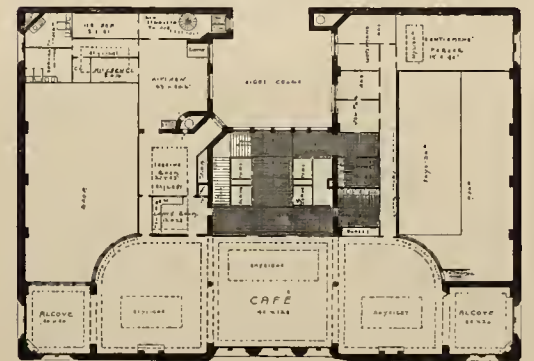
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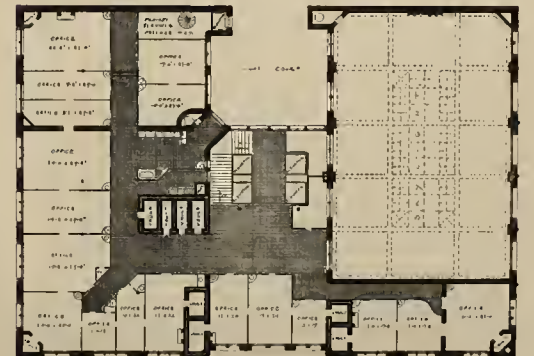
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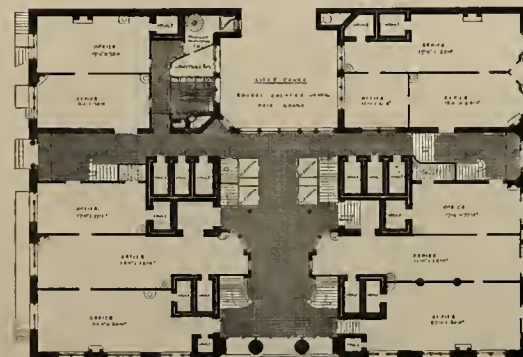
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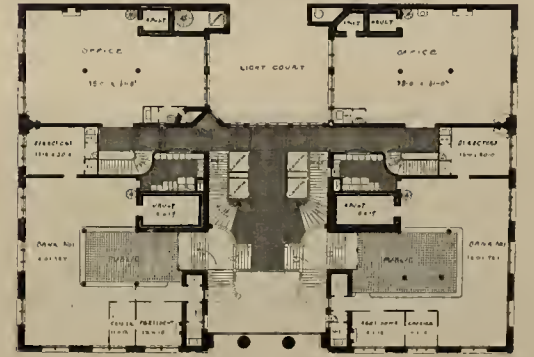
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BASEMENT.



FIRST FLOOR.

DECEMBER, 1886.

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THE third annual convention of the Western Association of Architects, the entire proceedings of which we publish with this edition, was most successful in general results. While, as may be seen, a large amount of business was transacted the meeting was essentially one of general fraternizing and good fellowship. The visitors were pleasantly entertained by the Chicago architects in an informal way which added greatly to the enjoyment of all, and much credit is due S. A. Treat, chairman of the Committee on Entertainment, and his co-workers for the pleasure thus afforded the visiting architects. Although from the large amount of work carried over to the fall season, owing to the labor troubles of the spring, many architects had a large amount of work on hand, which it was difficult to leave. The attendance was composed of a large percentage of representative men from fourteen states. These were Illinois, Indiana, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Missouri, Nebraska, New York, Ohio, Tennessee, Texas, and Wisconsin; several other states and territories where memberships exist not being represented.

JOHN WELLBORN ROOT, who was elected president of the Western Association of Architects, is too well known to his confreres both in America and Europe to require extended introduction. A young man, barely past thirty-five years of age, his development from a promising draughtsman to the designer and constructor of some of the largest and most important private buildings in the country, has been compassed in almost a decade. As a member of the Western Association his genial presence has made each confrere a friend, while his work as secretary during the past year was executed with a dispatch and thoroughness that will stand as an example for his predecessors.

JAMES F. ALEXANDER, of La Fayette, Ind., who was elected secretary, has been a prominent member of the Western Association since its organization. His exceptional abilities were recognized, and a year ago he was placed upon the most important committee of the year, that in charge of the bill to re-organize the office of Supervising Architect, beside being appointed chairman of the committee upon State Organization. Samuel A. Treat, the treasurer, served so well in that capacity last year that he was re-elected by a unanimous vote. The Board of Directors is exceptionally strong, Dankmar Adler was elected chairman, the other members being G. M. Goodwin, of St. Paul, George W. Rapp and Charles Crapsey, of Cincinnati, and C. A. Curtin, of Louisville. The convention will be held next year at Cincinnati, the choice being made after a careful consideration of the question, and will doubtless be attended by a larger number of eastern architects than were present at the Chicago convention.

PRESIDENT ADLER'S opening address was brief, straightforward and practical. Noteworthy features are his comments on the present position and tendencies of American architecture and the birth of that national style whose "star in the east" seems now fairly above the horizon; also the sound position taken in respect to competitions. The distinction drawn between that true and honorable competition which values a man by his executed work, and the shallow, and discreditable competition which looks no farther than plans and perspectives, is new and very suggestive. Mr. John W. Root's proposition to define the use and

loads for which a new building is designed in such manner that if subsequently devoted to some very different purposes the architect may not be held to blame for any consequent deterioration in the structure, is practical and important.

THE several important committees appointed last year simply made reports of progress, the work especially of those having in charge the bill for the re-organization of the office of supervising architect and for procuring statutory enactments by state legislatures being of such magnitude as to in all probability cover a number of years of earnest work before any appreciable result can be looked for. In the former, the work will in all probability progress more rapidly, as the heads of the treasury department, as well as the public at large, see the necessity for the change and the recommendation of the present supervising architect also voices the general sentiment contained in the bill. In the latter, the state legislatures and the public as well will have to be brought to a realizing sense of its importance before its passage can be effected.

THE most interesting report was that upon state organization. J. F. Alexander, chairman of that committee, reported five new associations and the almost immediate prospect of the formation of as many more. Among measures of general importance is that changing section four of the constitution providing for the retirement of members to the honorary membership list when they ceased practicing their profession, with the ruling that the entire list of membership should be revised by the Board of Directors to this effect. This will effectually assure to the association a membership composed wholly of architects in the sole and honorable practice of their profession; the association will, in future, publish its proceedings in pamphlet form. A resolution was passed by which any applicant is blackballed by receiving five dissenting votes. The debate on this resolution was interesting.

SOME progress is being made in the collection of legal statistics defining the status, rights and responsibilities of architects as determined by legal decisions in various parts of the country. In the unexpected absence of its chairman, Mr. Illsley, of St. Louis, the report of the committee on competition statistics was deferred. The committee to represent the Western Association at the next convention of the American Institute of Architects reported that they would perform this duty when the American Institute should hold its convention. Some very necessary changes were made in the method of electing new members to the association. A motion to remit initiation fees to members of architectural societies in cities where architectural associations had not been formed was proposed and referred to the Board of Directors, the general sentiment being to discourage union with the Western Association except direct or through the regular channel of state associations.

THE Royal Institute of British Architects has just issued its second volume of the new series of its *Transactions* and also its *Journal of Proceedings*, both of which were first issued in their present form two years ago upon the institute attaining its fiftieth year of foundation. The *Transactions*, published annually, contains the papers presented to the institute at meetings, with notes, etc., and is profusely illustrated with reproductions of drawings, photographs, etc., exhibited in illustration of the papers presented. In this volume there are 228 pages of letterpress and 84 pages of illustrations. The *Journal of Proceedings* is issued every

two weeks during the session of the institute, and contains the papers, in full or in abstract, read at the previous meeting with a full report of the discussion. The *Journal of Proceedings* also gives a full report of all business meetings, and is the medium of communication between the different societies and also the members.

THE *Journal* is not illustrated, except by the carefully selected advertisements, which form part of its contents, the object evidently being supplementary or accessory to the annual volume of *Transactions*. The roll of membership shows 419 fellows, 689 associates and a large list of honorary fellows and associates. The American architectural journals, received and recognized as such by the institute, are the *American Architect*, the *California Architect*, the *Sanitary Engineer* and THE INLAND ARCHITECT. Although *Transactions* is issued as official, the institute, as a corporate body, disclaims any responsibility for the statements in the signed articles it contains. The formulation of so extensive and elaborate a volume must of necessity involve an immense amount of labor, and its value to the members of the institute, great as it is, can only be equalled by the fidelity of the secretaries, whose work of compilation alone certainly taxes their time and energies to their fullest extent, making their office, however great in honor, no sinecure in practice.

THE Vienna *Bauindustrie Zeitung* announces the publication of two books on house heating and ventilation, which it thinks point to early changes of the most radical nature in these departments of building and equipment. These changes and reforms, strange to say, are to involve a complete reversal of our recent theories and practice and a return to antique methods. In some departments of art the revival of antique forms has been quite fashionable, but few would anticipate an early return to classic ages for instruction on the very practical subjects of house heating and ventilation. *Nulla vestigium retrorsum* seems in peril of falling into discredit, at last, according to our Vienna contemporary, which declares that "All the improved modes of heating and ventilation now in use fail to solve the problem of healthful, comfortable and economical heating and ventilation as admirably and satisfactorily, in every respect, as did the antique methods in relation to the requirements then existing." This comparison embraces the modern hot air, direct and indirect, systems, hot-water heating, steam heat, gas ditto, "and all combinations of the three," which is a pretty comprehensive statement. One of the books thus referred to is entitled, "Modern and Ancient Methods of Heating and Ventilation," by Dr. J. Berger (publisher not named); the other is, "Popular Treatise on Heating and Ventilation," by K. Ulmi, architect, published by Krebs, of Berne. This new (antique revived) theory, which our Vienna contemporary heralds in so impressive a manner, is thus described: "The modus of all rational and healthful house heating must be to warm the floor itself and make it the source of heat for the room by a gentle and universal radiation, which shall be promotive of health and comfort, according to the proverb, 'Feet warm, head cool.' While the methods of practically attaining this result are but cursorily outlined in the books referred to, we are able to announce, thanks to recent improvements in heating arrangements, that the problem may now be considered as fairly solved, and nothing more is required but to enlist the necessary capital to put it in actual operation." The opportunities for profit which will thus be opened to investors are believed to be sufficiently tempting to make it an easy matter to secure the financial assistance needed.

Essay on Inspiration.*

BY LOUIS H. SULLIVAN, ARCHITECT, CHICAGO.

PART I.

GROWTH.—A SPRING SONG.

WHEN birds are caroling, and breezes swiftly fly, when large abundant nature greets the eye, clothed in fresh filigree of tender green, when all is animation and endeavor, when days are lengthening, and storm clouds smiling weep, when fresh from every nook springs forth new life,—then does the heart awake in springtime gladness, breezy and melodious as the air, to join the swelling anthem of rejuvenated life, to mate with birds and flowers and breezes, spontaneous and jubilant as the glow of dawn, to pulsate ardently with hope, rich in desire so tremulously keen,—then wondrous joy to simply live,—and question not, to walk into the ample air, to open wide the portals of the winter-bounded soul and eagerly to hail the new-born world with voice like mountain torrent quick melted from the heart's accumulated snows,—even so eagerly and so voluminously does the song gush forth and wildly leap, tumultuous as nature's self,—to fall in gentle spray upon the misty valley far below, and there, to live bound up within the very life it sung.

O wondrous joy that this should be the springtime, and this the heart to greet it and to sing a song more wondrous still of joy within the sun-touched soul.

For such a song doth rise within me like a boundless symphony, rich chorded, and intense with lambent melodies which come unbidden from the general glow of life; a symphony whose theme is interwoven with this eager springtime life, a theme whereof the measure, caught up by the senses quick from every growing thing, doth seem to move, as all in nature here now seems to move in rhythmic cadence toward some subtle and tremendous consummation.

In tender light of dawning spring that song's incentive filters through the mists when the ardent sun, flushed and impatient pulsates hotly toward the summit of the heavens; in urgent need the equal mounting soul too pulsates toward the crown of inspiration, while pensive nature wakening with the morn makes manifest the latent measure of her sweet and procreant rhythm. The lark floats up to vocalize the limpid atmosphere,—the shadows shorten with her tense refrain. Abounding joy starts nimbly forth from hidden sources; vibrant, the heart, filled to the quick, o'erflows, the tongue unloosens, and the inhaled breezes sing thus, respirant, anew:—

O, soft, melodious springtime! First-born of life and love! How endearingly the thrilling voice of destiny hath called thee, and with what devotion thou hast come! And thou thyself hast taken up that call, made doubly potent by thy sweet embrace, and thou hast wrought the self-same magic on my slumbering soul.

Joy of the radiant day, joy of the sun-kissed verdure, joy of the radiant soul! The instant power of sympathy girdles and binds them together with bands sufficient as the ethereal sympathy of the planets coursing around the central virtue of the sun. So, orbital and responsive, colored to its rise, high noon and twilight, revolves the planetary spread of nature round the attracting and illuminating soul. By that soul's effulgent light look I out again upon thee, wondrous springtime, casting on thee brilliant high lights, and beyond thee changing shadows.

Now do I know thee as thou art, look on thee, through thee, and beyond thee toward a far off source whence thy joy has come.

Surge and surge through thee to me, the hugely undulating waves from distant raging joy within the vast expanse, that now break on our shores in foaming and majestic surf of springtime life.

Abysmal spring! The myriad nebulae were surf upon your cosmic shores. Stupendous winter passed away, the dawn mists parted in primeval splendor, and through your vistas floating rose the lark, the world, uttering as a morning song of promise the melodious succession of the races.

Of such are we; and high above our struggling, joyous verdure, our parting mists, our urgent and propulsive dawn, poised serenely, soaring ever toward the azure heights rises the immortal spirit of man, showering tones exalted, prophetic, volatile, spontaneous—a spring song to the waiting soul, a hymn of praise to nature's bounty, a sweet and unnamed outburst of itself.

Of such melodious origin are all our hopes, our sympathies, our desires; whence here, among us, coming daily, hourly into being, are great and lesser springtimes—each with its dawn, its urgent ruddy sun, its trailing mists, its aromatic sprouting verdure—its trilling songster in the sky.

Of such come likewise protean thought and action, roused and sustained in eagerness by the touch and impulse of desire. Far transmitted yet ever present the creative call of nature sounds inspiring, jubilant and sweet. Responsive, imagination rising quickly to the heights makes thoughtful action magically vocal and complete.

Through lesser springtime expanding, merging, completing, courses mysterious life, unfolding toward greater, ever greater, ever broadening springtimes, successively through these, and through each intermediary winter sleep, at each renewed adjustment both farther removed yet more intrinsically here than before, ever jocund and agile, ever onward impelled by the rapidly surging and inflowing currents, comprehending and so transmitting the past, fulfilling the present, gestating the future—ever fecund and joyous.

And all this while the dawn-bird singing! On the wings of spring he ever rises, looking down on the lesser springtime growth; looking down on the meadows, the forests deep, ever rising, unfolding and blending in song looks down on the wide spreading plains, on the curving sea, on the shifting clouds that brood over all; coming, from the greater heights looks

down on the distant enveloping haze of the swiftly receding world; and transmuted on high, now faintly heard, serenely attuning aloft it floats as the mellow companion the moon chanting softly.

In the stillness intent it now looks down on the balancing swing of the deep brooding world,—ever dawning; singing a hymn to its greater springtime, as I hear, floating high, sing a hymn to the perfect and spherical soul renescent of many a heaving springtime;—consorted still by a voicing spirit, the spirit of unending spring;—the desire, the appeasement, the joy of the world.

Effusing from such wonders interblended all around, has come to me thus, in soft pulsations, the elemental voice of Nature yearning. Whereby deeply do I know, thou generous and kindly Springtime, why I was touched, O, Prodigal! and captivated by thy presence. Now, nevermore to cease in its crescendo, has the lark's refrain returned in part to thee, a rhapsody of echoes from my soul.

INTERLUDE.

And now the day is done. The trailing splendor in the west fills me with peace. The beckoning twilight leads me toward the cool and placid night. Shadows and the dusk surround me, while here, accompanied by a cherished memory, soothed and lulled by the mystic moonlight, I meditate in swiftly deepening strain,—touched by a hint or weird suggestion, a premonition and uncertainty: whence comes it, I must know: wherefore, abiding here in gloom, residuary, musing, ineffably sequestered, do I follow hence the rich suggestive indirections of thy theme, thou softly dimpling shade of springtime; undulating with it through the swell of ample summer, gliding detached and phantom-like athwart its mellowing term, to pass away in transcendental twilight, and coalesce with star-lit thoughts beyond.

PART II.

DECADENCE.—AUTUMN REVERIE.

In pathless wilds, in gray subsiding autumn, where brown leaves settle through the air, descending one by one to join the dead, while winds, adagio, breathe shrill funeral lamentations, tired Nature, there, her task performed, divested of her lovely many-colored garment, withdraws, behind a falling veil, and sinks to sleep.

Like sentinels standing, like spectres, bare and fantastic the trees rattle their dry hard branches.

The migratory birds have gone.

The faded hills squatting grimly together, commune with wind and sky, echoing their misere.

The sap has sunk into the ground. There is no life but in root, and precarious broadcast seed.

A summer has departed:—never that summer to return; a great life has passed into the tomb, and there, awaits the requiem of winter's snows.

And we, the living, in sympathy, view, ponder and speculate; take up the melancholy theme within our hearts, and through the sad attuning of the mind look out again upon the endless spread of life and dissolution—the fatal chance and certainty of change;—nor think to contravene the destined action and reaction.

The coupled opposites which we call light and darkness, good and evil, fortune and failure, growth and decay, sound and silence, harmony and discord, love and indifference, hope and disappointment, life and death, law and chaos, and their quick engendered brood pass in crowded processional through the deepening twilight of our inclination.

Sombre through the gloom come to the impassioned ear the diminished strains of promise unfulfilled, melting the soul to overflowing languorous compassion.

Now darkness holds full sway: the heart, in anguish, sinks upon the bosom of the deep. The haggard winds moan to the faint-appearing stars; the answering voice of Night, sitting in the heavens, the crescent moon a gem upon her finger, her velvet gown spread about the unhappy spirit, speaks rest to the disconsolate. A hoar frost gathers, glimmering in the mild light; the wanderer, chilled to resignation, moves into the deep valley of negation, to garner up the lineaments of phantom souls.

Slowly the tenebre unfolds its content; the darkness separates, taking visible shapes—shadows within the soul, that are revealed as blighted lilies, and the trampled violet, the shattered oak, disintegrated rock, the parched air, the storm's destruction, the jetsam of the sea; the ashes of a city; the fallen bridge; impeded traffic; broken fortunes.

The shadows multiply,—a host of wraiths:—day dying in the twilight, the waning moon, the fading of yesterday within the sense. Their still, subjective voices spectrally recall our fleeting states:—the departed joyousness of childhood, vanished youth, faded illusions; bespeak the mind's indulgence toward the slow decay of once fresh spontaneity; plead with the heart to feel in sympathy and comprehend the sorrow of unrequited love: golden-warp-dimming shuttle, and so, in turn, to know the language of the silent cot, the footfall heard no more, the touching voice of reminiscence.

Then flock about erroneous judgments, aborted projects, failures of all kinds; as a multitude of seeds fallen upon barren soil, a multitude of seedlings nipped by the frost, a multitude of saplings stricken by adversity, a multitude of bearers shriveled by drouth or worm, a multitude of the gnarled and moss-grown vigorously dying, a multitude of rotting stumps,—a multitude of vanished lives.

In extremity of woe, the hapless wanderer seeks to turn, but there is no turning, and but one result: a lonely, yearning thing of sorrow, with whose last sigh the departing spirit wafted, settles slowly, as a leaf, into the Nirvana.

A great soul is thus swallowed up by deepest gloom within this sepulchre, and can nevermore, the same soul, unregenerate, return. Without alternative it yielded up its life, through overwhelming sympathy with death.

So he who with compassionate solicitude looks on the actual face of dissolution, must surely die in sympathy forthwith. Yet is this not the end;

* Read before the third annual convention of the Western Association of Architects, at Chicago, November 17, 1886.

for when in its predestined course the world of hope moves past another vernal equinox, in springtime ecstasy, mid the soft, persuasive rays of fixed serenity of purpose he will emerge from this abode of gloom, and greeting the warm air, will rise again into a nobler, greater life, to bear as rich fruition, a more complex sympathy, a metamorphosed insight, a profoundly changed belief.

And so, as wild flowers spring from manifold remains, do sympathies arise from regions of the dead, sending upward wondrous longings. As the plant grows, so thought grows, by what it feeds upon, its delicate chemistry changing poison into vital sap, to nourish growing sympathy, to the end that leaves and branches spread out in the generous, vivifying air, take on color, and firm visible growth heralding the bud that shall unfold with time its choicest worth:—the lovely flowering at once of life and death, which here, hanging in fragrant equilibrium within the present joyous certainty of life and the imminent surrounding nearness, though remoter certainty of coming death, must need exhale its soul in rapture till such moment when the latter force shall prove ascendant; then does it softly yield its trusted heritage of vital wealth, and sink again into the realms of night.

And so the living present, firm-rooted in the past, grows within its atmosphere, takes on local coloring of identity, fulfills its ordained rhythm of growth, condenses its results, and, waning hour by hour in all that marks its physical, mesmeric presence, fading in the inevitable twilight, it too becomes in turn a stratum of the fertile past.

And so does the individual enterprise, the individual far-reaching purpose, the individual transitory emotion, the individual triviality and incidental, fulfill each its rhythmical allotted part, and pass away.

By how much and in what way the penetrating roots spread through the soil, grasp and absorb from it, by so much, and in correspondence, will the topmost branches tower, move with individual peculiar sway in the storm, rustle likewise in the breezes, or stand superbly, calmly silent.

By such virtue of limitation the lily nods in aromatic luxury, a proud weed overtops the timid violet.

How grand and self-sufficient seems the forest monarch, how fair the lily; how ardent is living personal desire, how lily-sweet true sympathy; yet the subsidence and withdrawal of vital sustaining elements comes not more surely to one of these than to the others; unto each in normal time comes the ineffable serenity of dissolution, whose outward sign and garment is decadence.

When brewing tempests sounds a knell, 'who shall survive? The destroyer comes! Fearful its fury!

Afar at sea the angry waves engulf a bunch of pallid mortal specks. They are gone! with all their tiny hopes and fears. What are hopes and fears amid the raging elements, more than fantastic and circuitous sparks blown by the night storm from the chimney's throat to glow a troubled instant and vanish into black oblivion?

And in the surging forest, the tortured giants roar in such frenzied chorus that the exalted soul quakes at their awful music. In the intermittent glare the eye gloats on their huge resistance. A blinding flash! The instant deafening rattle and malodorous sizzling air. A hush! a frantic shattering roar, a prostrate growth of centuries, a mighty one laid low. Yet what is the forest, the labored and accumulated growth of years, but the plaything of the storm? And what is the total life of the forest more than the life of the human speck, or the spark, or the race, or the flitting smile? Each and all playthings of fate, momentary justifications, transitory trifles, great and wondrous only to the great and wondrous heart of man whose sympathetic soul envelopes them and draws them nigh, and interweaves them with its own catastrophe and bliss.

And when that heart, that soul, shall sing in duo, shall find a full, eventual expression, bursting into full-blown ecstasy of metaphor their rich and varied language shall tell a thousand thousand tales wherein the blended themes of life and death shall intermingle with our smiles and tears, wherein the limitless reality of nature and the limitless illusion of the heart shall coalesce, wherein the soul of man shall tell of Nature's soul in hymns of life, and yet wherein shall sound, responsive, murmuring in a gentle undertone, the constant, solvent song of death.

To death then, hear a hymn:—

Now crafty and concealed, now open jawed and furious, now bland and sophistical, void of form yet multitudinous in seeming aspect, patient of opportunity, certain of the final outcome, present everywhere, pressing against each individual life—testing it always and everywhere, gaining a little, losing a little, utilizing every means, missing no opportunity, pressing the whole surface and interior of all life, thy active resistance continually meets that ceaseless, aspiring force, while in tranquil depth thou dost simulate the soft, preliminary sleep of every germ.

Of many moods, all-devouring, insatiable, enormous and sinister, sublime, vast and terrible, to Thee, alike the vanished morning mist, the holocaust, the gurgling rale, and endless series of forgotten years, unnumbered longings, individual twinklings—Thou, Great Denier, hast gathered them in—and they are not!

Before the soul, comes pleading, self-justified in innocence, soft voiced and heartfelt, a beauteous bewitching form claiming, open-armed, expostulate, its individual dower of life. The soul, attentive, entranced, ecstatic, would overflow in plentitude of instant, ardent love, but thy inexorable form arises, and with unspeakable gesture thou dost spread an answering darkness that envelopes all.

And thou dost ride upon the agitating storm, thou sett'st a brake upon the coursing planets, thou art with the glorious meteors erratic through interstellar space, thou hast touched the burning suns and they are cooling; thou art with the microscopic crawling mite—following inseparably its earnest quest, looking through its minute eyes; thou speak'st with every mortal breath, and art resident in brightest smiles; thou art within thyself, thou fearful shade, and hast thine own great death.

More tenuous than air, more steadfast than the stars, harder than granite rocks, more mobile than running waters, variable and elusive as the

winds, thou art beyond our touch, imponderable, yet definite and real as shadows.

Thou art the reactionary cause of every change, without thee there can be no palpable or seeming growth, no sentient being; thou art the everlasting and sublime companion of all life; thou art the eternal shadow cast from things mortal by the eternal light.

In catastrophe, O power sublime, we know thee dread, yet in solitude of meditation I view its fury as thy comedy and by-play; but in decadence, in peaceful subsidence and dissolution thou art so tragic that the soul spontaneously believes thee friendly, adorns thee with a name, and holds thee precious in its sight.

INTERLUDE.

When from well-springs bubbling to the light in mystic dell, there flows a crystal rivulet glad and free, cradled by fresh mossy banks so lovingly tender, lulled by the twitter of birdlings and murmurous balsamic breezes, the sunbeams curiously peer through the leaves at its smiling, innocent face, and wish it joy.

Soon joined by rippling little ones who sweetly give it their all, it welcomes their tribute, and wantonly runs to the open meadows and alternate wooded reach.

Here sequestered 'mid high grass and shrubs, it gurgles, and crows, and fattens; then turns hither and there with sinuous curve, sings soft cadenzas to the intercepting stones, and hastens on to leap in burnished cascade from the ledge.

Anon it grows in dignity with each succeeding token from the confluent streams which, mingling with its genial flow, add their qualifying mites of tender power, abstracted from perhaps desolate or, it may be, verdure-laden hills, the porous strata, overhanging rocks;—and wrought on by the alternating influence of storm and sunshine.

With mingled persiflage and serious undertone, growing ever in earnestness it flows through rich diversity of landscape, spreading out at times to rest, in quiet sombre pool or solitary lake.

Thus grown and quieted it now moves between yon tacit banks which slowly individualize at each encountered bend and seem to hold their counsel.

One by one the larger tributaries in turn converge upon this widening stream and pour their inflow of rich abundant waters—slow moving messages from many lands.

The banks widen apart, become serious and broad of aspect, assuming each unto itself a separated and less kindly mien:—sandy bluffs rising to beetling cliffs, severely wooded hills, the austere forest coming to the water's edge:—whence all cast images of their restraining will and purpose on the receptive breadth of the current moving now in affluence and majestic ease.

The river-bed diversifies, shoals, snags, islands, soon irritate the current which sullenly yields to corrode the opposing shore.

The channel deepens, is fugitive, tortuous, lurking with engendered passions, and ever less friendly to the less friendly and receding shores.

Grown avaricious of power, tributaries large and small are swallowed up. Jealously the banks multiply their strength, each one for itself, grim, determined, serious. Alike to all are storm and sunshine, the slow succession of the seasons, moon and stars, the grand each day arrival and departure of the sun; they but take on a fleeting tolor from these things, and remain, themselves, preoccupied of their own destiny.

Increase and sombre intensity, culmination close by the limit; deep, broad, and still; high, firm and still; divided, inimical, one and inseparable, great river, great banks—(Behold here the delta!) disdainful, fierce, haughty, descend to the sea, and with measureless pride are lost in the depths.

PART III.

THE INFINITE.—A SONG OF THE DEPTHS.

Many a thought lies dormant in the sea;—exchanging secrets with fortuitous winds, free with the driftwood and the birds, yet sealing close its thoughts to thought-proud man, the vast sea broods and effuses ever, yet as I know, unspeakably, imparts with freedom only to the native one who equals it in elemental turbulence and serenity.

Deep-throated sea! sing to me now in occult murmurs, in rushing tumultuous plunging cadenzas, a song, an entrancing song of the Great Spirit; for here I sit impressionable, super-intent, and wholly given up to thee, to listen and to ponder.

The morning sun, young and blushing, o'erhangs thee, glancing ardently. I see his image pictured broken and glittering on the waves. So do I o'erhang thee, mighty one, yet where may I find the image of my ardent soul, where may I hear the arcanum unfolded:—the song of the depths, the song that shall attune harmonious and amplifying to the song within,—the questioning song, the unsatisfied song of the twilight.

The salt breeze, quickening, moves swiftly as the passing sea-gulls. Harshly they scream. Yet shall my thoughts ever circle and swiftly wheel in hunger over thee when the sea-gulls are fed?

In vain I sang with the jubilant springtime, inhaling balsam with the flower-laden air. It departed in sweetness, leaving me perplexed.

In vain I shuddered through the rustling depths of autumn's slow decay. That which I sought eluded me as before!

Here, then, in the simple air and by the simple water lies my refuge and my hope. Deny me not, for I am come as one nearing his journey's end; as a traveler at eventide, here must I seek final nourishment and rest.

For there must somewhere lie beyond this complex phantasm, beneath this eagerness of growth, this upheaval and fatuous endeavor, beneath this sorrow-laden, inextricable fatality of subsidence and decay, that which stands to them as water to the waves: deep, fluid, comprehending all:—bearing quiescent and passionless this endless agitation, this fascinating to-and-fro. Else why, as I tarry here expectant, am I so persuaded by the heavy rolling roar and subsequent gurgling thin-spreading swash and laconic return of the green transparent waves? How exultingly they rear

and curve, how they plunge impulsively upon the sloping sands! Yet in a moment they return—inevitably and swiftly they return.

Clear blue and crystalline the firm sky arches overhead. My buoyant craving darts vividly upward, in instant search: to instantly return: resolved to learn all from the friendly sea, so tangible, so near at hand.

Sing jubilate, turbulent sea! Of all things that the crowded universe contains thou art nearest like the human soul. For in thy very self, thy liquid depths and shallows, thy lightless and unfathomable depths, thy restless surface waves and currents, impressionable, incontinently shifting and changing, in thy very self unquestionably I see, with wonder and amazement I see near by and luminous my soul's inspiring image which I sought.

And as my soul with joyous ardor gazes on that image pictured softly in thy depths, so thou seem'st to rest, in secret stillness, brooding o'er a wonderously reflected image—image mobile and serene beyond compare.

Yet, alas! though fervently I conjure thee, still remains inscrutable that rare reflection, hiding which, thou smilest calmly toward me, evanescent smiles of billowy waves.

My backward turning thoughts recall the sorrow and illusion of my days:—How, earnestly, Inscrutable, I struggled through entanglements unending, searching deviously amid perplexities to find thy abode; prying with sharp-pointed thoughts, testing with the delicate touch of the heart, yet heeding not sufficiently, trusting not at all the simple promptings of the soul which spoke to me often as the sea now murmurs; but it spoke not in a language that I knew, therefore I heeded not its tender voice, which died away 'mid the rising clamor of random words, to lie, over-ridden and hushed—dormant for many a year.

Patiently I sought thee, yet preoccupied I passed thee by in my haste, believing I would find thee yonder, where the alluring rainbow of my thoughts so gracefully ascended.

Where I saw power I looked beyond for greater power; where there was storm and stress, I peered out anxiously toward turbulence sublime; when in dismay I gazed on death in many forms I questioned closely if beyond this lay an answer:—yet all these disconnectedly, with manifold obliquities of view.

Once, after hot pursuit along a sinuous trail, I called thee long and loud by many names: thou didst answer, but I, alas, mistook the murmur of the winds for commonplace, I heeded not the drifting odor of the woods, nor marveled at the nearness of the mossy bank whereon I lay me down to rest:—prostrate that my labor should remain without reward:—drawing over me as I sank in fitful sleep, a coverlet ingeniously contrived of self-spun gossamer, subtly shuttled through and through by dexterous guesses, consummately resplendent with the dazzling embroidery of long transmitted thoughts.

In pride of thought I sought to seize thee deftly, as one seizes with an instrument; I sought to snare thee with a loop of words; to trap thee in arctic zones, as a trapper setting his falls on the bleak and lonely winter wilds. Yet all in vain.

Furious, I went by night, malignant, to glean an answer from the storm o'ershadowed sea. Foreboding winds were shrill with angry warnings. The ancient boulders, heavy with odorous wet weeds, gloomily offered their support. Athwart the overcast and threatening sky the moon pushed rapidly from cloud to cloud, fitfully pouring her clear fresh light between, flooding the mysteriously approaching waves with shifting throes of shine and dark:—whence equal light and gloom within, sullenly revealing and obscuring dim far off undulating hints of unison, mysteriously approaching harmonies, modulating weirdly through the swell and subsidence toward tangible identity of sea and soul:—identity trembling here, now, in the awful hush before the storm, trembling in suppressed and vaguely lurking throes of consummation.

Lurking and trembling the lurid distant lightnings waver on the edge of the sea. In vain! In vain! The soft light disappears in murky night. No moon, no peaceful star. Hoarsely the wind-driven sea plunges furiously on the rocks. Enraged, and flashing through the sky, deliriously sweeps the fearful hurricane, swirling the rain-sheets, unloosening the thunder.

Elohim! Elohim! In utter darkness I! In vain, Inscrutable! Thou wert more near than my unhappy soul's desire was to itself, yet art Thou far off and unreachable as Thyself alone.

So fares the sea in rocking storm. So, tempest-tossed, I too abate, and balance with the measured swell, while storm clouds drift away, and heartsease, storm-abandoned, rests beneath the glory of the breaking day.

Clear morning light, refreshing air made vocal by the dashing spray, the neighboring beach low-spreading and withdrawn, compose my thoughts in strains akin to theirs which issue from the surf as jetsam from the wreckage of my hopes.

Deny me not, O sea, for I indeed am come to thee as one aweary with long journeying returns at last, expectant, to his native land.

Deny me not that I should garner now among the drifted jetsam on this storm-washed shore, a fragmentary token of serenity divine. For I have been, long-wistful, sitting here beside thee, my one desire floating afar on meditation deep, as the helpless driftwood floats, and is slowly borne by thee to the land.

Deny me not that now, awakening, as the spring awakes from mystic fleeting winter sleep, that I too may sing in tones rejuvenant yet softened by autumnal memories, in tones that shall have deep within them the thrill and intent of thine own native song, that I too may sing, as thou singest ever, a song of the depths, a wordless song of the near at hand, a song of the ardent present, a song of the vanished past, an inspiring song of the future:—the glad some song of the soul! at one with Inscrutable Serenity.

All hail, sublime serenity! Thou answerest the questioning heart, thou sendest peace and guidance to the striving soul. Thou art the voice of

the morning lark, thou art the power whereof it sings, whereof we also sing and dream.

Wondrous thou wearest springtime-life and ecstasy upon thy brow, while watching, tranquil, by the grave.

Thou art the lark, thou art the falling leaf; thy breath is the breath of flowers, thy voice is sweeter than the zephyr, deep, below the rumbling storm.

Thou floatest with the swallow at evening skimming the surface of quiet waters:—over the placid soul thou likewise comest as a delicately fleeting thought at the hush of day.

Raging catastrophe is now as a silence wherein the hungry voice of fate is heard as wolves are heard at night in the depths of the forest.

Whence the wail of decadence is to me as the silence of caves, wherein thy voice is heard resembling the dripping of waterdrops in the stillness.

Thou speedest thy rays to the sun, thou art dawn and twilight to the universe.

Life and death are as dreams of thy slumber; thou breathest and the seasons come and go.

Yet thou art near as the flowers of the field. To their lovely companions within the heart thou comest as storm and sunshine interblended with the melodies of spring.

I am sure that thou art very far and very near and round and about me, yet all that I may know of thee comes of the fragmentary token which I gathered on the sands by the sea.

But I know, best of all, that this token, once found, takes root in the soul as a seed that is dropped into virgin soil.

Through lesser springtime expanding its course doth lie to unfold 'mid the greater unfolding growths, to become in turn of nature's chosen, bearing joyous flowers and labored fruits in its onward course, impelled by the steadily inflowing currents of rotating seasons:—And I know 'tis by these fruits alone that the token is transmitted.

From this summit and consummation hence to decline as the sun declines in splendor from the zenith, merging with the roseate and gathering clouds, sinking tranquil through their midst, I know indeed that to thus depart in splendor as the sun departs is the final announcement of this token of serenity:—announcement echoed in the twilight by soft evening chimes from remaining hearts, denoting peace in the realms of night.

Over all, as a beautiful memory following deeds, arises 'mid soft refugence the mellow companion, the moon, chanting softly a song of endearment, a token-song to the great departed, a song of the depths, a song near at hand, harmonious and amplifying to the song gone hence, a song of inspiration.

And thus my song, declining, now sinks to its rest through the peaceful sky. Whereafter prolonging thought arises, following close, as a harvest moon, shining with milder, reflected light.

The thought that dawn, noon and twilight are ever linked with the coursing sun; that invisible tomorrow is even now its gliding companion, and will appear with it anon, dawning our day in urgency.

Whence I believe that action thus ever attends on flushed and procreant purpose, continually mounting with it toward the shifting summit of desire.

Without the sun, no dawn; without sustained desire, no fruitful or efficient action.

The thought that from such desire emerges art as action.

The thought that tallying such desire, (native, widespread, and unawares), appears the art of a nation: dispelling the gloom in its dawn:—whence works awaken imperceptibly, like a tinge of green upon the land, rejoicing in their lesser springtime gladness.

Through speedy decadence the weak are denied; surely the autumn nipping winds dispose of the loose and tremulous, leaving the hardy sound.

How quickly the lesser seasons change! How manifold and numerous, they ever turn involved in the greater and broadening rotation of growth and decay. Yet how tranquilly beneath the tumult and silence persists a hidden power, mysterious, inscrutable and serene, qualifying imperceptibly both growth and decadence, leading both, sustaining both, denying none, while through the lesser and greater unfolding springtimes, the tide of destiny ebbs and flows with mysterious undulations, working freely, through marvelous rhythms, toward subtle and tremendous consummations—consummations balanced in the end by a noble decay, and the sweet oblivion of death. Whence comes the strangely complex thought of rhythm—for all is rhythm.

The thought of attuning the rhythmic song of art harmonious and amplifying to the rhythms of nature as these are interpreted by the sympathetic soul: that herein lies a vital purpose and significance of art.

That to arrest and typify in materials the harmoniously interblended rhythms of nature and humanity, sustained and permeated by an essence wholly inscrutable, yet manifest as wondrously elusive mobility and abiding serenity, indicates the deepest inspiration and the most exalted reach of art.

The thought, that to perceive the material workings of this mysterious essence as the power underlying all growth and decadence, requires that the senses be highly spiritualized by the mobile, serene and sustaining influence of the soul.

That to attempt in cynical pride to seize this essence deftly with the mind as with a delicate instrument, or by conscious strategic methods whatsoever, is illusory and utterly in vain.

That a reverent attitude of the mind is equally in vain.

That it is not at all an essence for the mind to deal with, but for the soul to deal with; and this alone with the help of exquisitely vital sympathy.

That the mind speaks in terms of logic, which is vital, yet conscious and secondary; but that the soul speaks in terms of inscrutable intuition which is involuntary, vital and primary.

Whence the thought that the greatest art is at once the most and the least thoughtful—that logic and intuition are therein marvelously inter-blended.

That moments when the soul loses the identity of conscious mind and merges with the infinite, are moments of inspiration.

In tranquillity of meditation the soul unites with nature as raindrops unite with the sea; whence are exhaled vapors, under the hot and splendid

sun of inspired imagination, vapors rising through the atmosphere of high endeavor to drift away in beauteous clouds borne upon the imponderable winds of purpose, to condense and descend at last as tangible realities—sometimes in gentleness, sometimes in sombre fury, as the rotating seasons call. Here they nourish and refresh, and amid untold vicissitudes and metamorphoses, return at last to the great sea of Nature.

Whence the dominant, all-pervading thought that a spontaneous and vital art must come fresh from nature, and can only thus come.

That the specters of departed and once spontaneous art growths, which arise from their natural graves and walk abroad clad in tenuous garbs, like other phantoms and mock realities, must vanish with the dawn of artistic vitality.

That such a dawning is close upon this land there can no longer be any doubt. In the paling gloom the phantoms flit about, uneasy and restless, losing identity. The heavens are faint with the glow of a new desire; and with overflowing heart I rise through the mists, aloft, to catch a glimpse of the coming sun, and carol this prophetic song of spring.

Architectural Freedom.*

BY JOHN W. ROOT, ARCHITECT, CHICAGO.

NO thoughtful student of architectural history can fail to congratulate the profession and the public at large that the day of architectural freedom has at last fully dawned.

The night has been long and cheerless, heavy with the groans of weary watchers waiting for the day. Ages have passed since the first faint glow upon the hilltops told that morning was nigh. But now from every rock and crag, from every hill and housetop, from every face and in every glad voice, is reflected the brightness of the newly risen sun.

To us, basking in the glory of this new day, the darkness and danger of the night just passed seems almost a fiction, but when at rare intervals we realize that it was not, our hearts are wrung with pity for the vast throng whose lives flared up and flickered out in vain endeavor to pierce the gloom.

It seems utterly pathetic that in these dismal dungeons of night so many great men should have beaten out their souls, bowing their necks meanwhile to yokes the most intolerable; yokes of tradition, of precedent, of arbitrary and iron law.

To us who stand free and upright it seems impossible to estimate the vast change that has come; and yet we cannot fully realize the greatness of our own good fortune without striving to feel something of their misery, shedding, as we pass by, a tear of sympathy upon their hapless graves.

Let us, therefore, go back into the dim past and there search out a few of our professional brothers who spent their lives beneath these cruel tyrannies. In all other ages than our own, the architect has been unable freely to follow his own judgment or inclination, because of a vast number of purely arbitrary laws which met him at every turn. These, like the traditions of the Pharisees, came from darker ages, and, growing with each year, they, vine-like, encircled and choked the fair tree of true architecture.

Some of these laws were of almost inconceivable severity and impertinence. Think of a law which compelled the architect to design all columns with a fixed relation of height to diameter; all entablatures with a fixed height in terms of the columns beneath them. Among the Greeks the columns must moreover have certain well-defined peculiarities of form, and the entablature certain equally well-defined adjustments of its three parts. No Greek architect was allowed to place the cornice at the bottom of the entablature and the architrave at the top; nor to group the cornice and architrave beneath the frieze. Nor was he permitted to place the columns above the entablature, nor to erect the columns with their capitals at the bottom and their bases in the air. Greek tradition was so exacting as this.

Greek historians narrate that when the Parthenon was done, there was in Athens a man named Apollodorus, whose chief work was the designing of smaller habitations for the people. This Apollodorus, being one of the most enthusiastic admirers of the Parthenon, proceeded to build all over Athens a hundred little houses just like it. He built them of wood; he built them of clay and of cement; he made them of greenstone, of blue and of red. The metopes contained "ornaments," sometimes of beasts and birds, sometimes of flowers, but most generally of mere things. Just ornamental "ornaments."

Ictinus and Phidias bore this sort of thing for some time, because it seemed undignified to complain to Pericles. But one day, emboldened by past success, Apollodorus built a new house on which he erected the two end pediments after the Parthenon, but put a flat roof of tar and gravel between them. This, not only Ictinus and Phidias, but also Pericles himself, and all the people of Athens so resented, that Apollodorus was banished the city, and all his goods confiscated to erect a temple to the god Hermes.

The Romans, though in general much more tolerant than the Greeks, were scarcely less tolerant in relation to their architects.

It is stated that so humane a prince as Augustus ordered a Greco-Roman architect to be swathed in cloths saturated in pitch, and to be then burned, because he had built in Brundisium a house, all of whose windows had their arches at the bottom and their sills at the top.

So also you remember the scroll found at Herculaneum, which narrates the sad fate of the architect Tuticus, who built the house of Pomponius, the board of trade man.

Tuticus designed this house so that all the windows upon the front were shaped like large keyholes—an effect which must have been striking, though difficult for us to realize. When the house was completed, all the art critics of the day arose and made a great ado, and for some time the architect's life seemed in danger. At last the tumult subsided and all seemed over, when, one stormy night, Pomponius, the board of trade man, came home from the weekly meeting of the Knights Templar, and mistak-

ing a window near the ground for the keyhole of the door, tried to let himself into the house by jabbing his key into the window. Then the infuriated populace rose to a man, and tore the unfortunate architect limb from limb.

In later days, in mediæval Europe, we find the same absurd laws and prejudices.

One incident, handed down to us in an old missal now at Vienna, shows that as late as 1266, it was insisted that so absurd a law as that which placed the battlements of the house at the top should be vigorously enforced.

The Count Walter of Limburg had commissioned Otto von Sweitzercase to build for him an addition to his castle, in the shape of a great round tower. Now Otto had been a draughtsman in the office of Gerard de Von Trond, and also with Wenzel of Klosterneuburg, and, according to his statements (draughtsmen being much the same in all ages), had designed all the "essential" parts of the Cologne and St. Stephen's cathedrals; so, by the time he got ready to "start for himself," he had, in his mind, been emancipated from the thrall of all the traditions to which Gerard de Von Trond had so servilely bowed. He therefore conceived the notion that the new tower would look "real nice" if a very richly carved and macchicolated cornice were put about its base, like embroidery about the things which on men are by the vulgar called "pants."

Walter of Limburg, being a wise prince, had not bothered the architect much, and had not decided, as so many people do now, to live in the castle while the improvements were going on, so off he went, having lots of fun drinking, and fighting, and swearing when the architect's certificates reached him, till Otto told him the tower was done. Then he got unusually drunk, and came back. One glance at the tower, and the haughty prince fell back shrieking in the choicest Latin: "I've got 'em again!"

Next morning the great Otto Von Sweitzercase laid his head on the block.

Later still, in France, architects as able as Otto, fell victims to the prejudice of the time.

In an able paper published in 1884, Monsieur Jules Delibes shows that the notorious man in the iron mask was an architect, a certain François D'Erehomme. To him Louis XIV intrusted the designing of a wing to "Grand Trianon." Poor Monsieur D'Erehomme was puzzling over the design, worried by the fancied necessity of creating something entirely new for Le Grand Monarch, when the pencil he was using slipped, thus accidentally producing a form which, for a window, Monsieur thought quite too enchanting. This window he used with great freedom on the water front of the chateau; but alas! The capricious monarch was not pleased, and the iron mask was the end of it all—the iron mask and one high window. As Louis cruelly said, "He shall during his life see but one window, and that window he shall not be able to see through."

Passing backward to England at a little earlier time, we find in Samuel Pepy's diary, a charmingly told story of Nell Gwyn and Hugh May, the architect.

September 20.

The king seeing me this morning at Whitehall, whither Sir W. Coventry and myself had gone from a game of pôle môle, spoke to me of the new garden house he had built for himself. But, Lord, I did know by his smile that it was for that pretty, witty Mistress Gwyn to live in. His majesty said that to Lord Teviot he had intrusted that he should plan a fair fête champêtre for the day when the house should be complete, and his majesty bespoke both Sir W. Coventry and me that we should attend upon that day, at which I was exceedingly glad.

September 22.

By water to Kew, and thence to Hampton Court, singing many catches and glees most merrily; and Lord, how foxed Sir W. Cateret did get, and only eleven of the morning.

Arrived at the court, we did find my fair Mrs. Batelier, to whom I made many pretty speeches, and whom I kissed many times—may the Lord forgive me!

Mistress Nell Gwyn went with the king, and all of us following, with Sir W. Batten and Sir W. Pen, and a most merry party.

The king had not seen the new house, nor had Mistress Gwyn, and when we came in sight of it, there was Mr. Hugh May who did plan it.

Then Mrs. Gwyn, when she saw it, fell a-laughing and crying till we all thought she had a fit; and at last she says to Mr. Hugh May: "What aileth the house? Some evil hath, perhaps, befallen it! It seemeth all twisted and awry."

Then said Mr. Hugh May, very soberly: "No evil hath befallen it. It is well and soundly built." "Aye," replied Mrs. Gwyn, "But of what style is the architecture of the house?"

"Queen Ann, your ladyship," says Mr. May. Then we all fell a-laughing most heartily, but Sir W. Cateret, being well foxed, was exceedingly wroth, and beat Mr. May most soundly till we all did interfere lest the man be grievously hurt.

Where Hugh May got the name Queen Anne I don't know myself. Perhaps he got it from THE INLAND ARCHITECT.

One more instance from our own country will show that even as late as 1794 architecture had not yet become free in that perfect sense in which we understand freedom.

In a letter from President Washington to his agent, dated April 16, he writes:

By post of yesterday I am in receipt from you of plans prepared by Mr. Stevens for the renovation of my house at Mount Vernon. You will express to him my unqualified surprise that he should have supposed me capable of accepting designs so indecorous. That I who have endeavored to live free from blame in the eyes of my fellow men, and with the approval of my own conscience, should be thus considered by a man in my own employ is beyond my comprehension.

From the drawings before me, the pillars of the portico seem to be connected by a device of curving and irregular form, each side of which is different, the whole being filled in with small balusters like the stair railing within the house. The end gables also of the house seem to be adorned with all kinds of fragments of wood, cut into strange and meaningless designs.

I cannot fully comprehend the divers curious forms in which he has cast the windows. They seem to be in all respects different from such as are shown in the established works upon architecture.

Pray tell Mr. Stevens for me that after my retirement from the cares of the high office I now hold I expect to return to the privacy of my home and to reside at Mount Vernon. Therefore I do not wish to deserve the anger and just contempt of all my neighbors, nor to be in the state of Virginia a perpetual derision and by-word.

I will neither accept his work nor pay him a dollar for the drawings which you have sent me, and if in any respects the works upon the house have been executed, he must remove the same, under penalty of legal process against him for damage.

Thus you see how many and how painful were the restrictions laid upon architects in all these different ages, and what ignominy it must have been to be an architect, a practitioner in this noblest of high arts, when every step was taken with the feet thus clogged by galling chains.

* Read at a dinner of architects at the Union League Club House, Chicago, November 18, 1886.

We, living in the full light of the nineteenth century, freed from the thralldom of even our less fortunate brothers across the sea, we men of the Western Association of Architects can do what we please.

For us no Jove thunders on high Olympus; for us no bloody despot wields autocratic power; for us no ignorant peoples grovel in the beaten paths of their own superstition. This is the age, and this the country of the great architectural go-as-you-please. I know of but one grave difficulty which besets us. This is the answering of the question, so constantly asked, "What is the style of that house?"

All of the old styles known in the books are obsolete or obsolescent, and yet we still use their names. Why should we not frankly accept the actual condition of things and name our own styles. No one man may hope perfectly to do this; but I trust you will pardon a single, if only a feeble attempt, provided it be in the right direction.

Looking then back over the last twenty years of architectural development (for it is in the short space of twenty years that we have burst the last bonds of slaves), the first style which will rise up and demand a name will be what we may call the "Victorian Cathartic."

This you will all readily recognize. You can see it in full flower in the London law courts. It came upon us all in the time of our virgin innocence when architecture seemed the vale of pure Arcadia, and Ruskin was its prophet. Seduced by the blandishments of this new Renaissance, we yielded ourselves easy victims to its sway, and since that fateful day what crimes against Beauty and Truth and Power and the rest of the seven lamps has it not led us to commit.

"The Victorian Cathartic" was too true to be good, and too good to be true. As long as its method of production remained secret (in the category of other patent medicines) it had a great and ready sale. But when some too trustful architectural chemist or some too inquisitive lay patient found out the formula, the sales ran down to nothing.

Then came the "Tubercular Style," sometimes called by the facetious "Queen Anne." This style is characterized by two sorts of eruptions, external and internal. It has for a long time held us in more or less complete control. Sometimes, when it looks as if we had got it out of our systems, it breaks out with new violence; and the troublesome thing about it is that no man can say where or in what fresh form it will manifest itself. Viewed externally, you will recognize this style by its varied and highly colored eruptive features. Generally the affected house is red as to the scalp, with a complexion of all colors, from cobalt blue to saffron yellow. Its eruptive tendencies manifest themselves in all sorts of things, from wens to carbuncles and ringworms.

In its interior manifestations the Tubercular style often takes still stranger and more alarming forms. The house becomes, in its various functions, most strangely disarranged, and the various organs undergo the most extraordinary enlargements and contractions.

I have seen Tubercular houses in which the heart and liver were so changed from their normal sizes that the hall was big enough for a castle, and the attending servant couldn't pass around the table when the family were at dinner.

Yet, it is singular that the history of medicine records the case of no man who ever died of a Queen Anne or Tubercular house.

Then there is the Cataleptic style. This is supposed to have originated in New England, in the last century. It can be recognized by the careful suppression in its external aspect of all that would indicate life. In general the house looks like a hard-featured Puritan at Meetin',—only more so. Viewed internally, it is so white and bloodless as to be strongly suggestive of a prolonged cold water diet.

A style of work now in very common use and called the Romanesque might often be more properly called the Dropsical.

Here you note a general enlargement of all the members. The roof especially becomes greatly distended and very heavy, and the whole middle of the house is so swollen as to plainly indicate the nature of the disease. In detail each member partakes of the generally enlarged type, and as a natural consequence of this enlargement, there is a tendency to obliterate all angles and corners, creating instead rounded and protuberant surfaces.

Many other names applicable to styles of architecture now in vogue will suggest themselves to all of us, and under each of the general names I have suggested, many minor classifications might be named.

It is also true that where such wide freedom exists, the difficulties of general classification are greatly augmented. All that I can hope to do in a sketch like this is to convey a hint, which I am confident you will be swift to act upon.

A committee of architectural nomenclature might do much. I devoutly hope that by conference between ourselves and the American Institute we may in some way bring about the revision of this question.

As it stands, architectural nomenclature is a delusion and a snare.

Proportion of Joints and Connections in Framed Structures.*

BY S. G. ARTINGSTALL, CITY ENGINEER, CHICAGO.

THE details of construction in many cases are neglected, and do not receive the care and attention which their importance demands. Many structures otherwise strong are extremely weak in detail, owing to faulty construction or careless design of the joints. The joints are generally the weakest parts of iron construction. They should be proportioned so as to resist every direct and indirect stress which may come upon them under all probable circumstances, without subjecting the material to a greater strain than is legitimately allowed. The strength of a structure depends largely upon the proper proportion and distribution of material in the joints, and no amount of metal in the body of a member can compensate for a deficiency of strength in these parts.

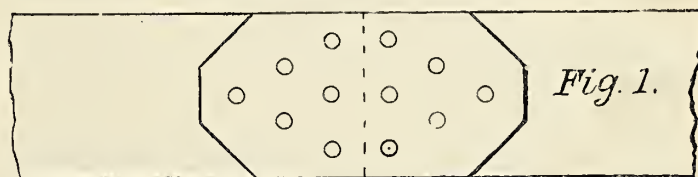
Riveted joints and connections are subject to injury by tearing the

rivets through the plates, when the bearing surface on the plate is too small, and by shearing the rivet where there is too low a rivet section. The first condition is very often neglected or entirely overlooked in many designs, although generally it will determine the size and number of rivets to be used, and often tend to an increase in the thickness of the plate. The pressure usually allowed upon rivet bearing is 15,000 pounds per square inch, and the bearing area is the thickness of the plate by the diameter of the rivet.

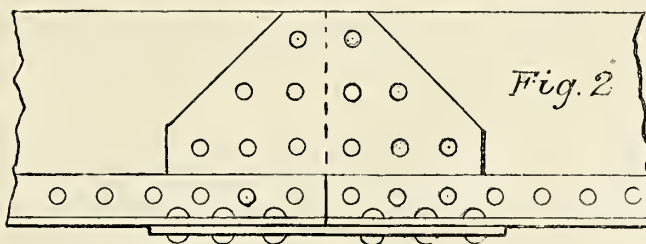
Shearing is produced by sets of opposing forces acting in the same or parallel planes, and for iron is usually taken as equal to its resistance to tension (in a well-proportioned tension joint the collective shearing area of the rivet nearly as effective as the area of the plate after deducting the rivet holes) but in riveted work perfect accuracy is seldom obtained, and in consequence there is not perfect uniformity of strain among the rivets; in many cases the holes do not coincide, and the iron is distorted and injured by the improper use of drift pins, instead of being reamed out and larger sized rivets used. If the rivet is too short the workman will not scruple to use them. They are more easily put in when the rivets are heated only at the point. They do not require quite so much hammering as when heated throughout, but then they do not fill the holes, and may even be loose; do not fancy they will be cut out on this account. The workman can make them appear tight when they are cold. Rivets treated in this manner will not remain tight if the structure is subject to much working. These little items, which go to make good work, can alone be detected by a competent working inspector on the ground.

By these imperfections some of the rivets are scarcely strained at all, while others are overstrained. Even with the greatest care, loose rivets are not uncommon, and perfect workmanship cannot be relied upon. On account of these defects the shearing value of rivets is usually taken at 7,500 pounds per square inch, when the value of the plate is 10,000 pounds.

The distribution of rivets in connections or splice plates, particularly in tension, require careful attention. They should be arranged symmetrically with reference to the axis of each bar, and the members weakened as little as possible by rivet holes.



In fig. 1 a single hole counts for the weakening, and the useful working section is equal to the section of the bar less the diameter of one rivet hole; the strain in the bar is diminished by the amount transferred by the first rivet to the splice plate, and although the section of the bar or plate is reduced by each succeeding row of rivets, the unit strain is not increased. This condition holds good when the number of rivets in two adjacent rows does not increase by more than the number of rivets in the first row.



When the section of the member to be joined is not uniform as in the case of an angle riveted on one edge the arrangement is modified so as to keep the center of the line of rivets as nearly as possible equidistant from the center of gravity of the section otherwise the rivets will be strained unequally. The first rivet in this case is placed near the lower edge of the plate instead of near the center as in the first example.

The question as to whether the holes in connections must be punched or drilled ought to be determined by the designer. In each case if the holes are located near the edge of a plate or the quality of the iron is poor it is liable to be seriously injured by the operation of punching, but it can be drilled without injury. When a number of plates are to be riveted together or a difficult connection to be made it is better to use drilled holes unless unusual care is exercised at the punching machine, drilled holes should be slightly countersunk to remove the burns which will cut into and injure the rivets.

For connections and splices, both in tension and compression, it is advisable whenever practicable to use double splice plates. When a single splice plate is used in tension a couple will tend to bend it and spring the rivet heads, and single plates in pieces under compression are liable to crippling at the joints.

As the splice plates must receive and transmit the full strain of the member joined, its useful section must be equal to it. Generally double plates require to be but half the thickness and require but half the number of rivets as they are in double shear. The length of the splice plates also diminish with the number of rivets so that double plates are economical. The strain from the member is more uniformly distributed among the rivets, the less the number in the direction of the strain, since the stress of an abutting piece is transferred to the splice plate by the rivets, and the rivets on each side of the joint have to bear the same shearing strain as the strain upon the plate, the loss from rivet holes in the splice plate is equal to the number of rivets in the row adjacent to the joint in the case shown in fig. 1, the section of the splice plate is reduced by the diameter of

* Paper read before the third annual convention of the Western Association of Architects, at Chicago, November 17, 1886.

three rivet holes, while the effective section of the bar is reduced by the diameter of one hole only, hence, the necessity of making the gross section of the splice plates somewhat greater than the sectional area of the member. Stoney recommends that single splice plates be made one and one-eighth times the thickness of the bar, and double splices each five-eighths the thickness of the bar.

For compression members the disposition of rivets in connections may vary somewhat from the rules given for tension joints, it being assumed that the strain is transmitted direct and that no loss is occasioned by rivet hole, when the workmanship is perfect, if the abutting joints are planed or dressed so as to afford a perfect contact throughout a simple plate with sufficient rivets to keep the members in position would be sufficient, but perfect workmanship cannot always be relied upon, and a close contact throughout the whole width of a plate is rare. The process of riveting tends to draw the plate slightly apart, and a small interval is theoretically as bad as a large one so that it is often better to assume that the strain must be transmitted through the rivets and splice plates, using the same values for bearing and shearing as in tension; but greater latitude may be allowed in the distribution of the rivets and neglect the loss occasioned by rivet holes.

PIN CONNECTIONS.

The efficiency of the riveted joints of tension members will vary according to the design, but it can rarely exceed 80 per cent of the strength of the solid plate, and hence it happens that the section of these members is increased in consequence of the loss from rivet holes by not less than 20 per cent to the theoretical weight of a tension member: that is, its section calculated on the imaginary hypothesis that it is made of solid iron, without joints or perforations. The size and length of the splices or covers is considerable, and their weight an important addition, in many cases over 12 per cent added to the theoretic section. With pin connections, these members can be proportioned very closely to the section theory demands. In many cases fewer parts may be used, for a certain amount of material put in one member will do more work than if distributed over two or more.

The use of riveted joints and connections tends to diffusion of strains with many parts and connections, while with pin connections it is the reverse of this,—the strains being concentrated in fewer and heavier members, with wider panels, and fewer connections, and better facilities of obtaining the effective use of the entire section of the material. With pieces which transfer the strains through the center of their diameter, the center of pressure can be made to pass through the center of gravity of the sections.

Pin connections require more careful and accurate workmanship. The pins must be turned accurately to the proper diameter, and the pin-holes in all members, both as to size and distance apart, must be mathematically correct. This requires special tools and appliances and careful workmanship, which, if not readily obtainable, will cost more than the saving in material over riveted work.

Pins must be estimated for shearing, bending and bearing pressures. The bearing pressure allowed is the same as for rivets, viz., 15,000 pounds per square inch. The bending pressure will require careful arrangement and design, so as to reduce the moment of forces to the lowest possible limit, it requires that the different members be so placed that no two adjacent members act in the same direction; the pin must not be too small, or there will result a heavy shearing action on the pin, or a crushing of the metal in the hole, causing elongation for want of sufficient bearing surface. Increasing the thickness of the head of a bar is not advisable, as this will increase the distance between bearings, with a consequent increase of the bending moments on the pin.

The practical results arrived at from many experiments show that with a proper arrangement of the joint, the greatest efficiency is obtained when the diameter of the pin is equal to four-fifths the width of the bar, and the thickness of the bar one-fourth its width. As the strain in the head of a link is less direct than in the body of a bar, and always a liability to imperfections in manufacture and welding, and it is essential that the bar should yield in the body rather than the head—to accomplish this, it is necessary to make the section of the metal in the eye opposite the center of the pin-hole, and perpendicular to the line of strain, not less than from $1\frac{1}{3}$ to $1\frac{1}{2}$ the section of the body of the bar.

Tables showing the shearing and bearing values of rivets for different thickness of plates and the bearing values and maximum bending moments to be allowed on pins for different maximum fiber strains, which are invaluable in saving time in the design of connections, will be found in the pocket books of Carnegie Bros. & Co., the Passaic Rolling Mill Co., and other manufacturers of rolled iron sections used in construction.

It may seem superfluous to urge upon you the necessity of making all the parts of a joint or connection as simple as possible, avoid all complicated or twisted pieces, particularly the bending or forging of shape iron, which is not only expensive but cannot be done without injury to the material. When the joint has to be riveted it is essential that it be designed so that the workman can get in his rivets while hot, and can deliver such effective blows of the hammer so as to upset or swell the whole length of the rivet that it may fill every interstice and inequality of the hole. A rivet which has been heated only at the point and made tight in forming the rivet head is of very little service; which is fully shown when a rivet has to be removed for any purpose; if it has been done in an imperfect or careless manner it can readily be driven out when the head is cut; but when it has been heated fully as much at the head as the point and driven by a skilful workman so that the effect of the hammering is transmitted to the more distant and interior particles, it will, in many cases, be necessary to drill it out, so completely has it become part of the iron into which it is forced.

For pin connections, the conditions of manufacture and the quality of material and workmanship are always of the strictest kind.

The arrangements and proportion of the different parts in the connections sometimes require a great amount of skill, and it is hardly saying too much to state that the value of a structure can be measured by the fitness and symmetry of its connections.

Architectural Grammar.*

BY PROFESSOR N. CLIFFORD RICKER, OF THE UNIVERSITY OF ILLINOIS.

IN the presence of a true masterpiece of one of the great architectural styles of the past, even the most careless observer is impressed by an emotion, whose source is far deeper than the superficial astonishment, caused by the splendor of the polished materials, by their variety and preciousness, by their massiveness, or by the profuseness with which they are employed. He feels that the structure before his eyes may almost be said to possess an organic life, so justly are its different elements proportioned to each other, and so nobly does the entire building fulfil its destined purpose. It seems to have been the work of inspiration, of tireless and ever-living beings, not of men like himself, whose best years are but few. Such a structure represents architecture rather than building, rather the poetry than the plain prose of our noble art.

If we examine another example belonging to the same style, and intended to satisfy some different need of man's intellectual or physical nature, we shall probably find it quite diverse from the former in its general effect, and even apparently entirely different. But a close examination reveals a similarity in detail and ornamentation, and shows that its apparent diversity is caused by a change in the arrangement of the plan, and also results from the adoption of a higher or lower key or scale of treatment and cost. In its way, it may be as perfect and satisfactory as the largest and noblest example of the style.

From a study and comparison of a series of selected examples, we eventually perceive that the style considered has a peculiar artistic flavor, so to speak, or rather a particular mode of decorating its structural parts and of conventionalizing its decorative forms. This may properly be termed the genius or spirit of this particular style, and is deathless; even though the purposes and applications of architecture may afterward be utterly changed, this spirit of the style may be revived and may furnish the inspiration required in the treatment of new problems by those architects whose souls may be so attuned as to feel its inspirings.

Taking a beautiful example of a different architectural style, we find that this style possesses a distinctive genius as well as the first, but of a quite different nature, rude and savage, refined and polished as it may be, but whose seal is as evidently impressed on all the works of this second style as in the first case.

By applying this mode of study to the principal architectural styles, we soon realize that each style has its special genius, all of these varying greatly, yet producing artistic and satisfactory results, even when seconded by poor materials and rude workmanship. Nowhere is it proved that the higher realm of architecture is exhausted, and that the genius of a new style may not now appear at any time, under suitable conditions, and by its esthetic beauty inscribe the name of America high among those of the great architectural nations of the deathless past.

Ordinary grammar may be, and frequently is, limited to a dry and terse statement of the most obvious facts of language, those facts which may be memorized by a disgusted and reluctant pupil, and forming the mere naked skeleton of the national tongue. Others extend it to comprise the arrangement of the words in sentences, and of sentences in complete paragraphs. But it seems to me that this, though essential, is but the least valuable portion of what grammar ought to teach us. It ought to lay before our eyes the hidden process by which the divine poem or the soul-enthraling tale is evolved by the soul of the writer, to teach us to taste and distinguish the diverse artistic flavors of the writings of different authors, belonging to all races and times; or, in short, that grammar should give us the bones, the flesh, and the soul of literature; better the last alone than the two former without this.

So in architecture, we may have construction pure and simple, which may be called the bones of the structure; we next have the various decorative forms and motives, which are applied to this construction, to render it more pleasing in our eyes, and which may be said to form its flesh; but the genius is that divine harmony of construction and decoration which unites both, and endows the structure with immortal life. Architectural grammar properly comprises all three, though too frequently applied to the arrangement and proportions of the details only, while construction is thought to be beneath the notice of art. But the massy, rough-hewn pier may be as beautiful and impressive in its way as the polished column with its delicately carved capital; the broken surface of the granite gleaming with the play of sunlight on the faces of its myriad crystals frequently surpasses the most careful work of the stonemason, if the architect but appreciates and properly employs this beauty.

Only that architect whose soul does pulsate in harmony with the genius of the style can revive a past architectural style, or hope to evolve a new one, worthy to rank with those of history. The most careful attention to the forms of details, and to the arrangement and sequence of these details, never produces an effective and really successful building, unless we can perceive in all its parts a harmony and consistency which causes them to unite in an organic whole, and unless no single change can apparently be made without injury to the general effect.

We may, therefore, define Architectural Grammar in its broadest sense as being the art of obtaining beautiful and effective results in architecture in any or all of the following ways:

1. By the innate beauty of the material used, its crystalline luster, fine color, variegated coloring, etc.
2. By the particular mode of treating the external surface of the material adopted, as in stonemasonry, etc.
3. By the contrast and harmony of color and texture of the various different materials employed together.
4. By the use of detail forms, beautiful in themselves, aside from their connection with the materials or their applications.
5. By the method employed for subdivision of the wall-masses, by means of projecting, recessing or emphasizing certain portions.

* Paper read before the third annual convention of Western Association of Architects, Chicago, November 17, 1886.

6. By the centralization and accentuation of some single feature or portion of the exterior, making this the keynote of the design.
7. By the suitable decoration of the interior by color and form.
8. By the use of sculpture in the form of fine bas-reliefs, panels and statues, as an adjunct to the architecture.
9. By the furniture and furnishing of the interior.
10. By the use of painting, historical and decorative, to ennoble the interior.

If we examine all the historical styles of architecture, we shall find them making use of most of the expedients here indicated, though this is carried out in different ways, because modified by conditions of climate, of national taste, and rarely affected by individual preferences. By collecting and classifying the modes in which these expedients are employed, we shall find that some are common to all styles, and will be equally applicable to all future styles; others are common only to a certain group of styles, as many of the proportions and relations of the details of the column and its entablature are equally applicable to the Grecian, Roman, Renaissance and modern orders. Others are peculiar to a single style, just as the peculiar system of surface decoration employed in Spain by the Moors is found nowhere else in precisely that form.

If this method were properly carried out by a competent investigator, it would furnish a definite basis of principles and rules, for judging of the real measure of success obtained in any structure, and would further establish the rules to which attention should be paid in designing any new work. It is actually the process of investigation now employed in the study of any science, and is the only one which promises to yield results of any value.

Architectural grammar has usually been incidentally treated as forming a small portion of a general system of esthetics, applied to all forms and manifestations of art and literature, and therefore has not been of much service to the architect, except for the cultivation of his taste in the most general way. Or, some author, gifted with marvelously keen insight into the production and composition of art works, has undertaken to lay down general principles for our guidance, deduced from a study of the works of all periods, or more commonly limiting himself to those of a single period. Semper was, probably, more successful in this way than any of his rivals, principally because he was a practical and successful architect as well. Yet the principles and suggestions in his great work on *Tectonics*, or *Applied Esthetics* are tinged by personal preferences and taste, and also by Germanic ideas, so that the work cannot be wholly accepted as a guide for an American architect. We all know the great merits and the surprising eccentricities of Ruskin, who is probably the most successful English writer on architectural grammar; at any rate he is the one most generally known, and whose writings have exerted the greatest influence in awakening and originating the present great art movement in England and America.

Ruskin enters into the spirit of the men who designed and erected the masterpieces of the middle ages, more deeply than any other writer, yet is always biased in favor of Italian and French art, and seems never to have appreciated the refined purity and noble elegance of the classical styles of Greece, Rome, and of the Renaissance. The ideal writer on this subject should be equally acquainted with all styles, biased by none, and should be capable of appreciating all, calmly comparing their relative values. Perhaps it is too much to expect that such a man should be produced in our busy world, that he should find opportunity for the necessary study, and that his words should be heard and heeded. Still, it would seem that more might be accomplished in this way than has heretofore been the case, if a suitable method were employed.

One of the greatest difficulties in the way of the modern architect, especially when his artistic training is self-acquired, or merely imbibed from his surroundings in an office, is that there are so few available books on the subject. We do have various works on the proportions of the orders, the details of the various styles, etc., which merely form the husk of the kernel, but few authors go further, excepting Ruskin, and bare before our eyes the processes and methods employed by the designers of great and successful art-works.

Some schools devote themselves to the practical study of architectural grammar, as the Architectural School of the Ecole des Beaux Arts at Paris makes designing the chief feature of the course of study, subjecting all else to the production of a few highly skilled designers. The office method is practically employed there, for the pupils learn from each other, and from the criticisms of their instructors, and by practice, rather than from any direct instruction in the principles governing the art. But they do eventually acquire a strong and appreciative sense of design and proportion, so that their works are rarely marred by bad taste in arrangement and form, though frequently conjoined with bad construction, as may be seen in almost any monograph of recent French architecture. The work of this school is also limited to a single style, the Renaissance, which simplifies the system of training, just as the School of Architecture at Berlin used to permit nothing which was not Greek or German-Greek.

This system of instruction is only available where large numbers of students are in attendance, some of whom possess a special genius in design, thereby serving to greatly elevate the tone of the art-atmosphere of the school, and to improve the character of the results of the system.

Although this culture is there acquired within the limits of a single style, the successful student easily obtains a similar insight into the proportions and artistic treatment of any other style, provided he can free himself from all mannerisms and special forms and proportions, peculiar to the style previously studied. Just as a student, who is thoroughly versed in the history, spirit and tendencies of English literature, can more readily acquire a good similar knowledge of German or French literature, than if he previously possessed a mere smattering of general literature.

The late Mr. Richardson was trained in this way, devoting most of his attention to the Renaissance style, and probably only incidentally studying the Romanesque in his vacation tours. But he found very little use for the Renaissance in this country under present conditions, and his wonderful and well-earned success is largely due to his keen perception of the

possibilities inherent in the fresh and unexhausted Romanesque, its suitability for the purposes of most of his buildings, and to his power to free himself from the mannerisms of Renaissance. His thorough knowledge of the architectural grammar of a single style was simply diverted into a new channel.

Very few architects can have such advantages of early training, but must pursue this study by means of observation of the effects produced by executed buildings, by reading such general works as are available, and above all, by the careful study and comparison of collections of photographs. These, with the constant endeavor to do one's best in every successive work, will soon elevate the character of American architecture to a point, when the development of a new and national style of architecture may confidently be expected.

Our country possesses all the material requisites, which appear to have aided the development and elaboration of the great historical styles. We have an abundance of all kinds of constructive materials, many suggesting and requiring new methods of artistic treatment, unknown to the past; a system of popular government permitting the most complete freedom of the individual, compatible with the general welfare of the community; a mixed race, descended from the most enterprising individuals of the various European races; wealth sufficient to provide for the cost of structures of almost any desired magnitude; an appreciation of good art, which is still youthful, but which is growing with a rapidity unknown in the past history of the world, and whose results in some of our great cities are even now scarcely inferior to those to be found in any time or any style; and we also find a strong and united feeling among the members of our profession, impelling them to unite and to labor for the common good.

With all these favorable conditions, it certainly does not seem too sanguine to expect to live to behold the development of a great and noble architectural style in America, rivaling those of the past. Whether this result is ever attained largely depends on the thorough and successful study of architectural grammar by each individual member of our noble profession.

The Relation of State Medicine to the Profession of Architecture.*

BY OSCAR C. DE WOLF, M. D., COMMISSIONER OF HEALTH, CHICAGO.

IN thinking over the various definitions of state medicine, a line from an almost forgotten dramatist suggests itself to my mind: Parkes, whose *Practical Hygiene* is a classic; De Chaumont, his posthumous editor and worthy successor; Dunglison, of the *Medical Dictionary*; Mapother, Day, Southwood Smith, Chadwick, John Simon, Sir Lyon Playfair, Bowditch, Billings, Rauch, and others, have all tried their hands at describing and explaining a subject which still remains

Like wit, much talked of, not to be defined.†

In some respects the latest definition—that of the secretary of our State Board of Health—is the best, as it is certainly the most comprehensive.‡ Dr. Rauch succinctly defines state medicine as the connection of the state, with both curative and preventive medicine for the promotion, regulation, and control of measures affecting the public health. But for the object of these remarks I shall confine the term to its old signification, as illustrated by Dr. Parkes, namely: the legal regulation of the conduct of individuals toward each other in strictly sanitary matters. "For example," he says, "pure air is a necessity for health; but an individual may have little control over the air which surrounds him, and which he must draw into his lungs. He may be powerless to prevent other persons from contaminating his air, and thereby striking at the very foundation of his health and happiness."

What, then, shall it avail a man, though he have the wealth of Cræsus and employ the lineal descendant of Vitruvius Pollio himself to design his stately mansion, if the conditions beyond his own control necessary to insure a prompt removal of his household wastes, the protection of his water supply from pollution, and the freedom of the air he breathes from contamination, be disregarded by that organization formed "to promote the general welfare," and which we call the state? Though there be observed in the building itself all the canons of all the authorities on ventilation and heating—from Dr. Arnott, who set himself the simple problem of securing "at will, the temperature most congenial to the human constitution, and air as pure as blows upon the hilltop," down to the latest patentee of the newest "automatic zephyr ventilator and breath of spring pulsifier;" though the highest skill of the sanitary engineer, and the most consummate art of the sanitary plumber be lavished upon its appointments, a man's house may, nevertheless, be anything but his castle against the foes to his health, if these be fostered and recruited by municipal neglect and state indifference.

Without the aid of state medicine, the architect will build the house in vain. He may successfully cope with the vicissitudes of a climate such as we have here in Chicago, where the mercury ranges from 22 below to 95 above, a variation of 117 degrees; where for months together less than an inch of rain may fall in thirty days, and then anon a tropical down-pour of five or six inches in twenty-four hours. He may even forecast the meteorological future and plan for a twenty-five per cent increase in the annual rainfall, such as is shown by the record to have taken place in this city within the past fifteen years. He may provide for possible seismic phenomena; construct fireproof walls and incombustible interiors; arrange for light in quantity and direction sufficient to satisfy a German oculist, air space and ventilation adequate to the demands of Angus Smith, plumbing scant and simple enough to meet the approval of that anonymous architect who recently announced in the *New York Evening Post* that the best plumbed house is that which contains the least plumbing. He may do all this only to find his best efforts set at naught by conditions which legalized authority alone can satisfactorily adjust or remedy.

* Paper read before the third annual convention of the Western Association of Architects, at Chicago, November 17, 1886.

† Thomas Otway, author of "Venice Preserved," etc.

‡ Address in state medicine, before the American Medical Association, St. Louis, May 6, 1886.

It is this authority, directed to removing causes which injure the health of the people, that constitutes state medicine, and it consists in that body of legislation, whether municipal ordinance, act of general assembly or federal statute, which is intended to promote the sanitary welfare of the community. It embraces not only provisions for the prevention, exclusion or limitation of disease, by quarantine, isolation, disinfection, etc.; for enforcing vaccination, prohibiting food adulteration, punishing the creation and maintenance of nuisances, protecting water supplies, etc., but also a rapidly increasing volume of legislation concerning the construction of buildings with reference to their security from fire, to their lighting, ventilation, drainage and occupancy.

"After medicine," says Mapother,* "the professions most concerned in the preservation of the public health rank those of the architect and engineer." And the genial and scholarly Irish professor of hygiene did not hesitate to acknowledge his indebtedness to "those most useful professions," when speaking of ventilation, water supply, baths, public parks, hospitals, lodging houses and the dwellings of the poor. It is the fashion just now to decry at least one of these professions, and we are told in a chapter on the construction of habitations in a recent text-book of hygiene, that "Architects and builders have not kept pace with the sanitarian in the study of the conditions necessary to be observed in building a dwelling which shall answer the requirements of sanitary science."

Still more recently a well-known sanitary engineer quotes the president of the Glasgow Institute of Architects as saying: "To most architects, and especially to young architects, the construction of a building is probably, and the sanitary arrangements, shall I say certainly, the least attractive branch of their professional work; and yet it is the branch of their work which most directly affects the health and comfort of our clients." The author of "The Sanitary Drainage of Houses and Towns" ventures to think that the president of the American Institute of Architects would not differ very much from his Scotch colleague in his opinion that architects attach too little importance to their responsibilities in connection with the drainage of houses which they plan, and for every detail of which they ought to have a feeling of personal accountability. And he adds for himself, based on his own experience in connection with plumbing work in houses designed and built by many of the very first architects of the country, "that the architects who know, who think or who care very much about the practical details of house drainage are very rare; and that they are more rare among the leaders of the profession than among those who, having less artistic merit, are driven to achieve reputation in practical matters." There are architects and architects, and this sanitary engineer has evidently had to do mainly with other than members of the Western Association, among whom I happen to know many who combine both artistic merit and that sincerity which Emerson commended in him who "builted better than he knew."

It may be true that some architects are open to the strictures of these writers; but I apprehend that the true explanation of any seeming disregard of what sanitarians consider the essentials of domestic architecture lies with the *clients* of the architect in their want of definite knowledge of these essentials and of their paramount importance, rather than with the architect himself. In his work on the "Principles of Ventilation and Heating and their Practical Application," Dr. Billings touches one root of the trouble when he says: "Every one who has occasion to examine the subject discovers that it is difficult to secure good ventilation throughout a building, but very few know what the principal difficulty is. Many persons seem to suppose that it depends upon some properties of gases as yet unknown, or upon some mysteries connected with the fact that heat is a mode of motion of the molecules of matter which can only be expressed in complicated mathematical formulæ. The essential difficulty, however, which architects and engineers will find most prominent is that of cost. If the question of expense be entirely set aside, ventilation becomes a comparatively simple matter." So too, I presume, the architect who has as tractable a client as Mr. Howells portrays in the "Rise and Fall of Silas Lapham," and who receives *carte blanche* as to sanitary details in general, finds no insuperable difficulty in satisfying the "requirements of sanitary science."

But even when this is withheld, it is clearly incumbent upon the architect, from his earliest interview with his client—whose sanitary ignorance may, as a rule, be safely assumed—to keep him advised of the importance of these requirements. It is the architect's duty, as Billings says, to see that "after the various additions to the plan which will be made at the suggestion of the owner's wife and several of his friends on whose taste he relies, have increased the cost above what he had intended, he does not, in the spasm of economy and retrenchment which will attack him, make the reduction in the ventilation" or drainage, or other sanitary necessity, rather than on some of the ornamental work outside. What your duty is, however, I do not need to tell you; still less do I assume to instruct you in those engineering and technical details which are of the essence of your professional attainments. When the public comes to know the value of the conditions of health in the home and is willing to pay the cost of them, the architect will not be found wanting.

"But how can he expect that others should
Build for him * * *

* Who for himself will take no heed at all."

A more profitable and appropriate line of comment by a commissioner of public health, accorded the privilege of addressing the members of a profession so intimately concerned with "the life of the building," is afforded by a consideration of some of the architectural causes of disease and the role which state medicine may play in securing their remedy.

During the last census year the causes of a total of over 750,000 deaths were reported in detail. Of this number the group of general diseases to which diphtheria, typhoid or enteric fever, cholera infantum, etc., belong, furnished more than 200,000, and the group to which consumption belongs furnished 136,000 more. Fully one-half of the total mortality of the country is properly credited to the preventable diseases. Not all of these,

it is true, are wholly preventable by any attainable perfection in the construction of habitations. Given the introduction of the particulate germs of scarlet fever, for example, into a family housed in accordance with the most approved hygienic requirements, and the disease will be as certainly developed as these germs find access into a susceptible organism. Pure air, unpolluted water, spotless cleanliness, in themselves afford no protection against these specific communicable diseases. There is this, however, to be said concerning the whole class of eruptive fevers—smallpox, measles, scarlet fever, etc.—as well as diphtheria, whooping cough, and other diseases whose propagation and dissemination depend upon a particulate contagion, to wit: That the subsequent safety of the dwelling into which such a disease has once obtained access is very largely a question of its architectural construction. The solid particles of these contagia—dried up into a mere dust, absorbed by porous bodies, attached to adhesive surfaces—retain their poisonous properties for varying periods, some of them for a practically unlimited time. Before the discovery of Jenner had thrown its ægis of protection over the world, almost every dwelling was a perennial center of small-pox infection; and it is not yet definitely known how long this poison, or that of scarlet fever, diphtheria, erysipelas, hospital gangrene, etc., may remain potent in the plaster of a wall or ceiling, or in the woodwork of a room. Thanks, however, to modern sanitary science, this class of diseases is steadily losing its deadly preponderance, and out of the total of deaths each year, it now furnishes less than 10 per cent. With better housing, purer water, fresher air, and more wholesome food, comes a greater resisting power to all forms of disease; and sanitary architecture goes hand in hand with the other branches of sanitary science in restricting the sway of preventable diseases.

And yet that there still remains much to be done is shown, among other facts, by the statistics of mortality from consumption and pulmonary diseases. More than one hundred thousand persons will have died in this country during the present year from pulmonary consumption alone; more than one-eighth of the total mortality from all causes combined. With the stock illustrations concerning the evils of impure air, the Black Hole of Calcutta, the Grotto del Cane, the bird and the bell glass, etc., we are all tolerably familiar; but at the risk of taxing your patience, I will briefly refer to what has long seemed to me the most striking and conclusive experiment of this kind ever made. A body of men, rigidly selected by strict physical examination, at the best period of life, engaged in open-air duty of a moderate character, comfortably clothed, well fed, housed at considerable expense, and promptly cared for, even in slight illnesses, by the highest medical skill—in short, the British soldiers in barracks, at home, in time of peace—were found to be dying off at the rate of 17.5 per thousand per annum, at the same time that the mortality of both town and country populations combined was only 9.2 per thousand at the same ages, and of the country population at those ages alone was only 7.7 per thousand.

When the cause of this great disparity came to be investigated it was discovered that the diseases known as pulmonary were the fatal maladies which specially affected the soldier and laid him low. It was discovered that while in civil life the deaths by pulmonary or chest diseases at the soldiers' ages were 6.3 per thousand, they amounted in the cavalry to 7.3, in the infantry of the line to 10.2, in the Guards to 13.8. Of the entire number of deaths from all causes in the army, diseases of the lungs constituted the following proportion: in the cavalry, 53.9 per cent; in the infantry of the line, 57.277; in the Guards, 67.683 per cent. Pushing their inquiries one step farther still, the reporters came at last to the kernel of their task. Why should these selected soldiers suffer so especially from diseases of the chest? Was there anything in their occupation, in their clothing, in their diet, that would account for the phenomenon and indicate the predisposing causes of their excessive mortality from pulmonary disease? On these points the reporters were able, by the process of exclusion, to remove many suspected causes. They were able to exclude night duty, want of exercise, unsuitable employment and intemperance and debauched habits. These influences the inquirers did not, of course, ignore, but by comparison they found them insufficient to account for the disparity which was seen to exist between the soldiers and the other classes of the community.

I quote the rest of the story from the graphic pen of Benjamin Ward Richardson, whose "Field of Preventive Medicine" is at once the most charming and the most instructive volume in sanitary literature: "At last they came upon one cause which they could not exclude, and which, in accordance with the Newtonian saying, was both true and sufficient cause to account for the phenomenon. That one cause, or rather that one series of causes, was overcrowding, insufficient ventilation, and nuisances arising from latrines and defective sewerage in barracks. A single agent, *vitiating air*, acted with such intensity, especially when superadded to a certain degree of exposure, as not only to produce in the foot guards an amount of chest disease and especially of pulmonary consumption greater than was produced in civil life by all the other causes united, but actually to carry off annually a number of men, nearly equaling in the infantry and actually exceeding in the guards, the number of civilians of the same age who died from all classes of disease." Dr. Richardson justly characterizes the record of these observations as the best and most forcible, because most extended and accurate, that has ever been supplied respecting the influence of confined air in the living and sleeping apartments of men who are accustomed even to an active life and to the enjoyment of much outdoor exercise. If it had been desired to carry out a great physiological experiment in order to determine how diseases of the lungs might be artificially induced in men who had been healthy up to the time of the experiment, no method could have been devised that would have led to a series of results more striking or more convincing. Neither could the experiment have been more satisfactorily concluded than was done by following the recommendations of the commissioners. They recommended that an entirely new system should be introduced into barrack-life; that air, fresh and pure, should at all times circulate through the buildings, and especially through the dormitories; and that every soldier should have efficient and sufficient breathing space. Since these regulations have been in force the subjects of this experiment no longer occupy the unenviable position of

* Lectures on Public Health, delivered at the Royal College of Surgeons in Ireland, 1864-67.

being first in the ranks of those who fall victims to pulmonary consumption and other affections of the respiratory organs, but are rather the models of a lower mortality; so that as the jails, once the foci of fever, are at this time the most free of that disease, the barracks once the foci of consumption, are now the most free of that destroying malady. In the jail in its very worst condition of foul air, the disease *typhus* was the scourge; in the barracks with foul air, but less foul, *consumption* was the scourge. Pure air substituted in both places, both diseases have been enchanted away. Well may Richardson say that lessons such as these should never be cast aside while yet in many of our best houses—best in relation to their appearance and cost, not in respect to their construction—the errors that were common in the barrack are still present, and rooms are used as sleeping rooms which stand in the eyes of the sanitarian like so many experimental boxes for the synthetical development of pulmonary disease. “The room is too small; the room is devoid of a fireplace; the room is devoid of a ventilator; the room has a window that will open with difficulty and at best but a little way; and yet that room is used as a sleeping room for one, or it may be two persons. These are the rooms in which they who are disposed to pulmonary affection find their early fates; these rooms are the vestibules to the grave.”

To this picture, as a fitting contrast, may be added the following seven points suggested as the “charter of health” which a house should have, in its construction and its architecture, to fit it for human habitation:

It must present no facilities for holding dust or the poisonous particles of disease; if it retain one it is likely to retain the other.

It must possess every facility for the removal of its impurities as fast as they are produced.

It must be free from damp.

It must be well filled with daylight from all points that can be charged with light from the sun without glare.

It must be supplied with perfectly pure air in steadily changing current.

It must be maintained at an even temperature.

It must have an abundant supply of pure water.

Such houses are by no means impossible ideals. They have already been realized in many of our suburban towns, and by the agency of state medicine, they may be made possible even in cities. As many of you are aware, the forthcoming session of the general assembly of this state will be urged to pass a law framed under the auspices of the Illinois State Association of Architects to provide for the regulation and inspection of the sanitary construction and alterations or modifications of buildings in cities and villages, and to secure proper ventilation and sewerage systems for habitable buildings, etc.

This act is intended to supplement existing legislation upon the subject, and under which, in this city alone, a great saving of life is annually effected.

Section 686 of the city ordinances declares that “it shall be the duty of the commissioner of health to enforce *all* the laws of the state and ordinances of the city in relation to the sanitary regulations of the city, and cause all nuisances to be abated with all reasonable promptness,” etc.

This ordinance is very general in its character, but there are many others which apply directly to specified unsanitary conditions in all classes of buildings, and under this legislation the sanitary work of the city is divided into:

First: The sanitary work performed in occupied places of habitation and which includes all buildings wherein any person may dwell or lodge.

Second: The control of the sanitary conditions and safety as relates to egress, protecting machinery and storage of dangerous materials in places of employment or service.

Third: The exclusive control under the state laws of all the sanitary arrangements or conditions, such as the heating, lighting, ventilating, plumbing and drainage to be provided in every building within the city, during its construction and which is to be used as a place of habitation.

Section 1347, of the city ordinances declares “that no person shall hereafter erect, or cause to be erected, or converted to a new purpose by alteration, any building or structure which, or any part of which, shall be inadequate or defective in respect to ventilation, light, sewerage or any of the usual, proper or necessary provisions or precautions for the preservation of health.”

The state laws invest the commissioner of health with authority to control all the sanitary arrangements to be provided in any habitable building within the city.

The enforcement of these laws by the inspectors has been the means of accomplishing more valuable sanitary work than by all other ordinances combined, in that by their enforcement all improvements made are of a *permanent character* and place the building (except in cases of accident) in a permanently good sanitary condition, thereby benefiting all occupants uniformly throughout the city.

The construction of dark, damp, unventilated living rooms has been wholly prohibited for the past two years. All water-closet rooms are provided with sufficient external light and ventilation, and are never permitted to be in any way directly connected with any habitable room. In fact, all sanitary conditions in the construction of buildings in this city are now enforced, which are in anywise conducive to the health of the occupants.

What state medicine may do to regulate the conduct of individuals toward each other in strictly sanitary matters, and so to promote the end of hygiene, which aims at rendering growth more perfect, decay less rapid, life more vigorous, death more remote, is well illustrated in our neighboring town of Pullman, where a corporation stands in the relation of the state to the community in this regard. I have already treated of this town from a state medicine standpoint, and will only now cite its death-rate as the sufficient criterion of the success which may attend the plenary control of the sanitary conditions of human life.

The town has now been in existence six years, and its population is about nine thousand—a period sufficiently long and numbers great enough to eliminate any exceptional conditions which might obtain. The death rate of the town of Hyde Park—of which Pullman is legally and terri-

torially a part, in which the same natural conditions exist, and which is occupied by substantially the same kind of population as that of Pullman, averages 15 per thousand annually, according to the last report of the State Board of Health. In Pullman, the deaths have ranged from 6.9 to 7.6 in every thousand of population—or less than one-half the deaths in the territory immediately surrounding the town.

The average for American cities is over three times this number, and the average annual death-rate of the world is 32 out of every thousand of population. The average annual death-rate in the city of Mexico is 56 per thousand, or eight times the rate in Pullman. The healthful conditions here are unequaled by those in any city of the world. The lowness of the death-rate is remarkable. With one quarter of the physicians that ordinarily administer to a population of this size, Pullman has only a little more than one quarter of the deaths usual in the same number of people.

Gentlemen of the Western Association of Architects: Your profession is one of the highest exponents of the material attributes which differentiate man from the beasts which perish. Man alone makes for himself an artificial climate, outwits the elements, and makes all nature tributary in his habitation to the convenience, strength and beauty which your ancient authority, Vitruvius, says are the three requisites in every structure, and without which no building can merit our esteem and approbation.

If, as Sallust says, “every man is the architect of his own fortunes,” you, gentlemen, are more than the architects of your own. To your professional intelligence, sincerity and skill every man must trust for that without which fortune is but a dead sea fruit—a healthy life.

Foundations.*

BY W. W. BOYINGTON, ARCHITECT, CHICAGO.

AT the request of your worthy president, I have prepared a paper upon my practice and experience in building foundations.

In the first place, no person can be considered a competent architect without having a thorough knowledge of the principles and essential requisites of a permanent foundation, particularly for heavy structures. The very best design for a building, if erected on an imperfect foundation, may be, in a measure, destroyed or rendered unsightly, and, not infrequently, unsafe. So that one of the essentials to success of an architect is, first of all, to thoroughly post himself on the subject of the various kinds of soils and substrata that he will have to encounter if his practice becomes extensive, as too much study and care cannot be taken when important structures are to be erected. No one uniform system of preparing foundations for any and all kinds of substrata will answer. I have found it necessary to vary in different places in this city, also in different parts of the country, where I have been called upon to use my judgment in determining what kind of material should be used. You may consult some persons who will say piling is the only safe foundation for soft, compressible soil, such as we find in Chicago and many other places. Others will say concrete is the only proper thing to put in to secure a permanent foundation. Others will recommend timber. I have found it desirable to use all of these kinds, adapting them to peculiar situations as circumstances seemed to demand, and sometimes combine all three in one substructure.

In later years the use of cast and wrought iron, and steel rails have been used for the purpose of covering large areas without being obliged to go down so deep to secure proper offsets in masonry; or to avoid having the masonry occupy so much of the basement above the floor surface.

It is also argued that the cost of supplying steel rails is no more expensive than a larger amount of stone masonry, or as much so.

While on this point I would like to refer to a paper prepared by C. W. Trowbridge, and read before the Chicago Architectural Sketch Club, August 30, 1886, which was published in *THE INLAND ARCHITECT AND BUILDER*, September, Vol. VIII, No. 3. If Mr. Trowbridge's investigations and theories are true, it becomes a very serious question as to the safety of using steel rails in connection with concrete for broad foundations.

The points he has brought to notice seem reasonable and philosophical, as he dwells mostly on past results and observations made, showing the effect of cements on steel. From his standpoint I should incline to favor cast iron, as the difference in cast iron is but a trifle more in cost, and its known qualities for durability altogether in its favor.

I have met with success with each, separate and all combined. My early experience and practice as an architect was very different and more diverse than any young man nowadays will be likely to experience. I was brought up among engineers, architects and master builders. Architects in my younger days were not so numerous as they are now. A master builder in my younger days was something more than a contractor of the present day. The former used to vie with each other to see which would do the best work; the latter vie with each other to see which can slight his work the most, with some honorable exceptions. One of my earliest attempts to put in a foundation for a heavy brick warehouse, which was to be erected on a black muck or peat soil, which varied in depth of from five to ten feet below drainage, at the bottom of which was blue clay, quite similar to the Chicago clay. It was very expensive building stone walls to the depth required. I adopted what was then called a system of puddling. First dig the trench of the required width for the footing stone; then fill in the trench with coarse, sandy gravel, settling the gravel with water. The gravel was not allowed to show itself above the water. Always keep water enough to envelop the sand and gravel. In this way all interstices would be filled solid. When this was filled to the height required for the foundation, then the footing stone would be commenced, and no better foundation upon which to erect a building could be made on such soil. Those buildings stand well today. Another experience I had in building was where heavy banks would press against the wall on one side and a flow of water constantly running on the other side. That I did repeatedly in constructing some of the large cotton mills in Massachusetts. One of the last designs I made before leaving for Chicago was for the

* Paper read before the third annual convention of the Western Association of Architects, Chicago, November 17, 1886.

largest cotton mill ever erected before or since, so far as I am informed, which was for Holyoke, Mass., and was situated as before described as to its foundations. The design was for seven stories and 400 by 80 feet. This schooling in my early days was in connection with eminent engineers, which gave me an assurance of success in my future course of practice. Some of you have undoubtedly observed the system of timbering and floor construction that has been adopted in the Marshall Field warehouse, on the corner of Fifth avenue and Adams streets. It is almost identically the same as was used in constructing cotton mills forty years ago, and it is a good form of construction where frequent columns are not objectionable.

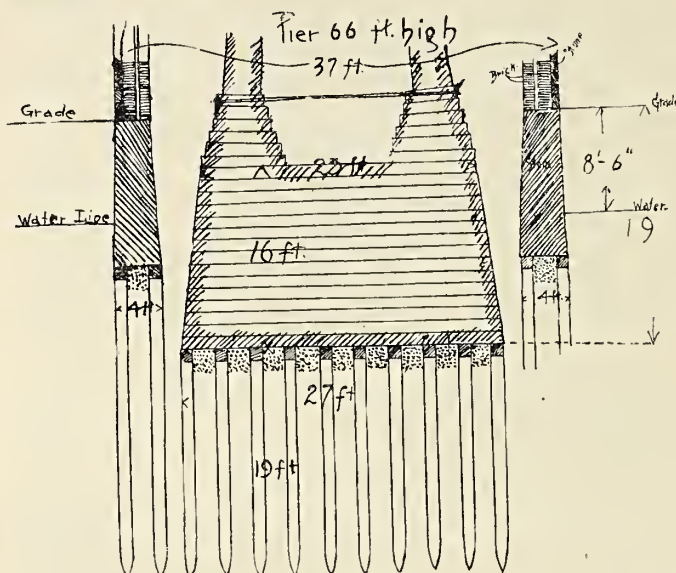
When I arrived in Chicago to reside the city had just commenced to construct their new system of water works, by pumps and reservoirs. A few years passed, when it was found necessary to establish a new system of water works for the city, by constructing a tunnel under the lake. The first system proved inadequate and a partial failure. I was selected as the architect for the reconstruction of the buildings, all of which had to be done around and over the buildings and engines that were first erected so as to not interfere with the pumping works or the old inlet of water supply from the shore basin. One of the first things to encounter and rather the most difficult to construct was the large stone smokestack, 80 feet high and a 5-foot flue, which to accommodate two boiler houses it was necessary to place the chimney directly over the old water conduit inlet. I undertook that task against the judgment of the engineer, he fearing the disturbance of the inlet, which must be done so as not to interfere with the water flow. In excavating for the foundation, it was found the old wooden conduit ran diagonally across the foundation, as I have represented on the diagram I now exhibit, by which you will see I drove piles on each side of the conduit, about 20 feet long. I capped these piles with oak timbers so as to have the bottom of the timbers clear the conduit. I filled the spaces between the timbers each side of the conduit with concrete, then planked over the timbers and commenced a stone foundation on the planks, as shown by this sectional drawing, all of which stood well for nearly two years without settlement. When the new tunnel was connected with the pump wells in the building the engineer took his own course without my knowledge of what was being done below my foundation of the chimney, or anyone else giving any thought to it. I was sent for one day by Mr. Cregier, the engineer, to come over to the water works, as there was trouble with the chimney. I went over, and found to my surprise that the chimney had gone down about five inches all at once. Still it stood plumb on all sides. I inquired of Mr. Cregier what was being done below. He said nothing that he was aware of that should interfere with the chimney. He said Mr. Chessborough, the tunnel engineer, was then putting in the new tunnel. I asked him if he could give me the location and the depth down. He said he could by the plans in his office, which, by a little figuring, he told me the tunnel was directly under the chimney, and so many feet below the surface. I took that data and applied it to my plan, and found, as I have represented on this diagram, that the top of the inlet tunnel was about two feet below the bottom of my piles under the chimney. In excavating for the tunnel the men felt the earth give in all around them when the brick arch was part way under the chimney. They hurried on with the arch without knowing the cause. There has never been any disturbance since.

On the opposite or west side, in front of the engine house where the present water tower stands, I encountered a quicksand bottom about 20 feet below the surface. It was very essential that a permanent foundation should be secured, as the iron standpipe, 175 feet high, had to rest on its center and receive the large mains from the pumps and the distributing mains. Should there be a settlement at this junction to any extent, the inlet and outlet pipes would break and destroy them. To guard against this liability on a quicksand bottom, I drove long piles and very close together, which drove very hard for the last few feet. I capped the piles with heavy timbers, filling all the interstices with concrete; then covered them with 3-inch oak plank, with a heavy stone foundation on top, as shown by the diagram. The inclosing wall surrounding the standpipe and iron stairway rested on the same foundation. These walls were pierced with five large holes for the receiving and discharging water mains, so that it actually stood on piers 175 feet high and about 16 feet at base, as shown by the diagram now presented. This diagram also shows the foundation of the inclosing building, which, as you will see by the diagram, stands on an independent pile foundation, cut off much higher than for the standpipe. Between the inclosing walls and the walls surrounding the standpipe there was a stone roof; and had the roofs of

the main engine house and the boiler rooms been fireproof our water supply in the great fire would not have given out as it did.

Another similar experience I had in putting in foundations for the tower of the Chicago University, and for the Dearborn Astronomical Observatory in this city.

In building the University stone tower, which is about 150 feet high, I commenced it directly on the surface of the earth. I found it was sandy gravel for several feet in depth, and the situation would require grading up to a sufficient height to prevent frosts from getting below the bottom of foundation.



About 100 feet farther west and on a lower piece of ground, I had to erect the Astronomical Observatory. Here I found no gravel, and but a few feet to water. It was considered very essential to have the stone tripod, upon which the telescope was to stand, very firmly set, so as to avoid all earth vibrations, which would disturb and destroy accurate observations. In order to secure this, borings were made, and nothing but blue quicksands were found. By putting the foundations down deep and isolate them from the surrounding earth, it was considered it would insure a freedom from the earth's vibrations immediately around the Observatory. To accomplish this we excavated to the depth of 25 feet in quicksand and drove long piles below that. After capping the piles with timbers, and concrete between and heavy oak plank on top of timbers, the stone foundation was commenced and built up, as shown by the sectional drawing now exhibited; by which you will see the inclosing building was built on piles higher up. In constructing the tripod and the surrounding building, the different floors had to be completely isolated from the tripod. Nothing was allowed to touch it from the bottom to the top, for fear that any movement on any of the floors might jar the tripod. In this manner of construction a perfect success was secured, without the least settlement. And the tower, 100 feet distant, which, as before mentioned, having been built directly upon the surface, stands equally as well, without settlement. I have no doubt but that the same quicksands underlay this tower, as we found under the Observatory, on the same level. But, as we had about 12 feet of gravel on top, it has never settled.

The next point I will consider is the relation of building party walls, or building walls all on one side of a party line, as is frequently the case in this city, where the two adjoining parties cannot agree to build a party wall. In this my experience has been varied. It is contended by some architects that it is not safe to build important buildings all on one side of a party line, and utterly impossible to do it permanently. I find that some architects have had a sad experience in attempting the construction of walls on one side of the party line. I don't wonder that such parties think so. I have been called upon to bring into line, and to a vertical position, walls of large buildings which were built all on one side of a party line, and the walls leaned over to an alarming extent. To right up such walls, and hold them, you will admit is a much more difficult undertaking than it would have been to have properly constructed the wall and building in the first place. Still I have accomplished such things. I have also built walls all on one side of the party line of some of the highest buildings in this city. This was after I was told by a prominent architect that it could not be safely done. It is a well-established fact, however, in the laws of mechanics and engineering, that where a known force will be exerted in any one direction, like the inclination of a wall built all on one side of a party line, is to push out and over. That such an inclination can be successfully resisted by applying mechanical forces in an opposite direction, there can be no question among scientific men. Upon that theory I am willing to stake my reputation as an architect. But to say it cannot be done, is admitting more than I should want to acknowledge. Some of the worst results from faulty designs and improperly constructed foundations I have ever known, has been from designs of highly educated young architects, who, from the want of experience, made total failures. I say experience, because they had a scientific education, and the same parties afterward have become eminently successful. So that you young beginners need not give up if you at first meet with rebuffs and failures in some of your undertakings. But guard yourselves against committing such glaring blunders as many architects, well versed in the principles of construction, have done in our large cities. Do not be so self-conceited as to believe you know everything. If you have doubts, don't be ashamed to ask advice of some of your brother architects. Architects hold a very responsible position to

their clients, and to the safety of the public. We cannot be too careful. It is not infrequently the case where an office is over-crowded, in the best regulated offices, where matters are pressing hard upon the principal architect, that oversights of some important points in the construction of large structures, will be made, and a disaster, or a very expensive remedy will be the result. This has been the case in our eastern cities, and by some of the prominent architects, and it may occur here in the West. Hence, I say, everything should be fully considered and reviewed.

Gentlemen, I thank you for your attention.

Hints on a National Style of Architecture.*

BY ISAAC HODGSON, MINNEAPOLIS, MINN.

IF possible, and we think it reasonably so, we should have a style of architecture that can be distinctly recognized as American. To accomplish such a desirable object we cannot wholly discard precedent; we can, however, select, combine and improve to an extent that will entitle us to a style which we can call our own.

Perhaps some of you will say that that is just what we are doing, and also pressing the good work. If so, allow me to suggest that you are laboring under a serious mistake.

It is manifest that individual effort is being made in a very indefinite way, and without any system or co-operation whatever, to accomplish something new—fresh in architecture. Yes, truly, some of it is so very fresh that I trust you will all heartily join in the application of at least a little attic salt, which, perchance, will render some aid in saving our future architecture from whimsicalities and becoming obnoxiously offensive to good taste and understanding. A radical change and improvement is manifestly now in order. And to acknowledge our inability to effect the desired reform will be a virtual admission that we are mere dolts, cheap draughtsmen, only doing the bidding of mammon.

Cannot we control, educate and thoroughly cultivate the taste of the votaries of the fickle god, and thus remove as rapidly as practicable the odium that now attaches, and that is sure to follow, if we refuse to discharge our manifest duty. Yes we can, if we will; but never, I fear, by individual effort. To be successful there must be unity of action, and to effect this there must be organization, and such organization should naturally grow out of or spring from the Western Association of Architects, composed as it is of members fairly representing every recognized school of architecture in the civilized world, men of great and varied attainments and ability, and of every degree of culture and refinement. Just the material requisite and necessary to accomplish the object in view, and it does seem that true patriotism alone should stimulate all to promptly move in this important matter.

The field is broad and open, and contains unlimited resources to be rounded into form for the comfort, pleasure and gratification of every citizen, and the honor of the great republic. Yes, a country which, it seems, is vastly superior in all material things; aye, and I might say in mental capacity, to Greece and Rome in their palmy days, notwithstanding the enchantment lent by distance.

Now I hope you will not misunderstand us, for we do not undervalue the vast results achieved by our ancient brethren of the so-called classic period. They certainly accomplished wonders in their day and generation, and indeed there still exist in this and every other civilized country many noble specimens of humanity, mighty men of thought and powers of intellect, who can see no excellence in anything pertaining to architecture except those classic, and, we might add, Gothic models, which as typical styles have filled pages of school and other books time immemorial, and are still descanted upon by professors of art and literature, just as if legitimate architecture had its birth, growth and perfection in the land of Greece, and to be proficient in the art we have only to carefully and correctly copy the examples handed down to us from a people whose lives, talents and energies were largely employed in creating and establishing a mythology and erecting temples to the gods thus created. Base indeed is the man who can be satisfied to occupy the humble position of a copyist, no matter by whom the originals were prepared—aye even if they had been prepared by the gods themselves, if that were possible. We recognize no Olympus and no Olympians now, and bow before no mythology, therefore need no temples for or to the mythic gods.

Ours are the real temples, those of science, scientific pursuits, art, commerce and manufactures by which peace, prosperity and happiness are brought to the greatest of all temples, our homes, where we can humbly bow to the great Jehovah, whose voice is that of science, and which is now heard in thunder tones throughout the civilized world. This is the voice which it is our bounden duty to obey.

Previous to the Christian era, when the domestic temple and its happy influences were in the far distant future, and during the mythologic period, which was but the dawn of a higher and happier faith and civilization, and also of the happiest and highest civilization, that in which we are so signally blessed, all nations and people seem to have performed the work which in the providence of the Grand Architect of the universe, in the evolution of ages was allotted to them. Yes, patiently and no doubt conscientiously they labored, built and constructed under the best light given them during the time in which they lived, and for purposes which, doubtless, to them were dear and sacred, but which to us have little importance except the art involved in the process.

And we know you will all heartily join in honor to our brethren of all ages who so faithfully labored, and whose lives were devoted to the cause for which we are here in convention assembled.

I am sure we will always stand ready to do honor to all our brethren who have crossed the Rubicon, and also to the memory of all those who have finished their labors and passed on to the immortal land, and while we continue to revere the memory of the fathers of our art, let us not forget to do justice to ourselves, whose lives should be practical and real, leaving to

the greatest possible extent the ideal with the past, where it certainly ought to belong.

From the foregoing general remarks it might possibly be surmised that we are somewhat opposed to classic architecture. Such a supposition would be a gross mistake; the contrary is the fact, for we are in favor of the best, most refined and purest of everything, but first we are in favor of fitness, for without this requisite quality there can be little or no excellence.

Now, the fitness of things is just what concerns us most. All who have read the history of architecture from the earliest ages up to the last century ought to know that every nation and people of every denomination, through their architects, earnestly labored and frequently under adverse circumstances, to invent, design, arrange, erect and complete their structures to properly meet their necessities and requirements, hence the evolution and also variety of styles, for each style is peculiar to the nation or people giving it birth. And each has been duly honored by the entire civilized world. Some originated, and some adopted and combined, hence the styles, Renaissance or transition styles, which indeed brought far greater honor and glory to Italy, France and other countries than did all their blood-bought victories. It is the peaceful arts that make nations really and permanently great and prosperous.

Just now allow us to remark that we have neither time nor space for a regular old style dissertation on Greek, Gothic and other styles of architecture, and as old style things are of secondary importance here, we must confess that we have little or no inclination. Our age is a glorious reality, strictly a practical age in which we are all expected to do our duty, which to perform creditably is a task of no mean proportion; it should, however, be done with alacrity and in the true spirit of patriotism.

To meet the practical demands, and also the present desire for art novelties, we must stretch every nerve to obtain the greatest results in the simplest, most economical, scientific and artistic way. This is the only course that will enable us to successfully combat the bold empiricism which has so long usurped the place of architecture, and for which we as a class will be held responsible. Indeed our neglect of remedy application is having its direful effect already. The argus-eyed press critics are in the field, and with their general good common sense and ready pens, we may soon expect to hear from them in a way that will make us feel the necessity of prompt and vigorous action.

It is, perhaps, unnecessary here to explain the reasons why this country has not been generally more successful in the application of means to ends in the fitness of her architecture. Suffice it to say, however, the fault does not lie with the legitimate architects, but should be placed where it rightfully belongs as above intimated.

Fogysim and mutual admiration societies belong to the past. Today the great army of reform is gallantly marching forward with science, art and manufactures inscribed upon its banners, and of all men and professions we should take the front rank.

Our brothers in scientific pursuits, the noble army of civil engineers, are, if you will allow me the expression, keeping time to the music, and grandly performing their part in the march of progress and reform. Far greater interests depend on our efforts. For these many years, in this great country of ours, hundreds of millions of dollars have been expended annually in the erection of every class of buildings, some of which, indeed, are highly creditable to our profession and country. But, alas! what shall we say about the remainder? Just what the English architect told the lawyer, who inquired the name of the architect of the tower of Babel,—there was no architect employed on that celebrated structure, hence the confusion.

Now, from the above, as well as from our own knowledge of the facts in the case, it seems that the services of the architect are absolutely necessary to prevent confusion. Yes, and they are also necessary in the proper construction and erection of all new and beautiful forms out of nature's created matter.

And no intelligent person would think of expending any considerable sum of money in the erection of private or public buildings whatever without the services of the architect, which, indeed, are now generally acknowledged to be indispensable. The ends, however, may not always justify the means in the selection, and this fact alone justifies the presumption that the legitimate profession will always be held responsible for every architectural abortion, no matter by whom erected.

It is absolutely our duty then, and we owe it to the public to at once proclaim a higher standard, and proceed to establish a modern school based on rational principles exclusively, the title of which should be: the American school of architecture. Only members of the Western Association and American Institute of Architects, in good standing, should be admitted, and they should be required to pledge themselves, say, as follows:

1. That they will faithfully and honestly, to the best of their ability, endeavor to improve the civil architecture of America, and that they will render all the aid in their power in the introduction, development and perfection of the national style of architecture known as American.
2. That in doing so they will, in the construction of buildings of every class, be wholly governed by the laws of mechanics or scientific rules on the subject.
3. That they will confine themselves as far as practicable to such simplicity and breadth of design as will produce the longest unbroken perspective lines, the greatest dignity and repose in all their works.
4. That they will carefully study and practice economy, using only such quantity and strength of materials of whatever kind as shall be warranted and justified by the accepted authorities on the subject.
5. That they will strictly observe the law of practical fitness, excluding all barbaric crudeness, massiveness and severity, and give a truthful and spirited expression of purpose to all their creations.
6. That in the matter of fenestrations of every structure they will introduce any and every form of arch and lintel that will serve convenient, practical and æsthetic purposes.
7. Regarding columns, pillars, etc., that they will introduce parallel

*Paper read before the convention of the Western Association of Architects, Chicago, November 18, 1886.

shafts, and regulate their height by the safe value and measure of the material employed in their make-up to safely sustain the superimposed loads, and that, when in order, they will boldly and gracefully mold their bases and capitals, enriching the latter with spirited carvings representing native fruit, flowers and foliage, or geometrical pattern, or both.

8. That in all lintels, archivaults, vousoirs, etc., the actual known value of the materials used to sustain their own and superimposed loads shall be their dimensions.

9. That they will not project belt courses, cornices, copings, pediments, gables, etc., over the sustaining wall-line to a greater extent than that which is necessary for protection, and when enriched, ornamental purposes.

10. That in the roofs and chimney-shafts, parapets, etc., of all their structures they will endeavor to produce the best picturesque effects in the most unpretentious and monumental way, avoiding unnecessary breaks, and, as far as practicable, unequal angles in the roof contours.

11. That when dormers are introduced they will endeavor to make them important, not numerous features, and gracefully embellish them to properly relieve the broad roof surfaces.

12. That they will introduce no exterior decoration except that which is necessary to properly accentuate and relieve broad plain surfaces, using geometrical patterns, native plants, foliage, fruits and flowers, and appropriate selections from the animal creation for the purpose.

13. That they will in all interior decoration and finish endeavor to produce harmony with the exterior, except where it may be necessary to vary for special and convenient purposes.

Now in this way we might proceed indefinitely, for the subject is ponderous and of almost unlimited scope, requiring equal powers of mind and force of will to shape and place it before the profession, where it can be properly treated.

It is perhaps unnecessary here to add that the members of the proposed new school would, and should, be at liberty to practice in any other style, giving, however, the preference to the new.

Sewer Gas.*

BY C. E. ILLSLEY, A. AND C. E., ST. LOUIS, MO.

TEN or a dozen years ago the general public knew as little about sanitary science, so-called, as about the dusky tribes or Central Africa, and cared less. The most gruesome of all specters which disturb modern homes, sewer gas, was then unknown, and happy in that ignorance which was bliss, many a head then rested peacefully on a pillow where it now tosses in anxious fears of a pestilence which is supposed to walk both by night and day.

In those primitive times people lived, or existed, in a manner which, from our more sanitary standpoint, is almost shocking to contemplate. Sewers were rare save in large cities. Everywhere else kitchen and family slops were usually thrown out upon the ground at the side or rear of the house, or into the street in front, and there left to dispose of themselves. In the city of New Orleans, La., and in most of our suburban and country dwellings, this is still the custom.

The midden, or "leaching cesspool," as we now call it, was almost universal, and generally formed a prominent feature of the landscape at the rear of the house, where it disputed the honors of the back yard with the family well. At times it stood in closeness of proximity to both house and well, which it is now positively unpleasant to remember. This feature still survives in Baltimore, and to a considerable degree in Philadelphia, not to mention smaller places, and is today almost the only arrangement known in Paris and other European cities, which nevertheless report a very low mortality rate.

Heating furnaces, in those unsanitary days, drew "fresh air" from the nearest and most convenient point, with little solicitude about the purity or sweetness, even though it came from a cellar odororous with dampness and mold, with mellowing turnips and rotten cabbages. If the cold air duct failed to open near a leaking drain or cesspool, it was a matter of accident as much as of precaution. The bathroom was oftenest placed in the center of the house, in that space which from lack of light and ventilation was thought fit for nothing else. It derived air and light through the one door which opened into the main hall, and through the same opening it probably gave back as much air as it received, if not quite as fresh. In the matter of freshness, however, there was not always much to choose between the front hall and bathroom. When this apartment had been fitted with a copper-lined, wood-encased tub, a marbletop basin and a pan closet and a cast-iron soil pipe from the drain in the cellar had been carried up inside and nicely capped under the water-closet seat and the whole apparatus decorously encased and concealed from view, it was thought that the perfection of convenience, comfort and luxury had been reached. No one stopped for a moment to question its salubrity, and, indeed, it must be admitted that a very large proportion of the houses so built were, in view of modern sanitary teachings, unaccountably healthful.

Finally, the uncovered well supplied the standard of wholesomeness and purity in drinking water, and we may yet recall a ballad of wide popularity, which praises the health-restoring virtues of a cooling draught from

"The old oaken bucket,
The iron bound bucket,
The moss covered bucket,
That hung in the well."

But now all is changed. The external conditions of health and disease, of epidemics, malaria and contagion have become a study, a new science of sanitation is evolved or being evolved, and a new profession, that of the sanitary engineer, is already beginning to bid for public favor, and in some cases to dispute with architects the right to plan and superintend house construction. Soil pipes must now open at both ends and extend into the open air far above our house tops. Traps of every shape, material and style are advertised, the pan closet has been discarded for a multi-

tude of new forms, as siphon closets, valve closets, washouts and others, trap ventilation, receiver ventilation and drain ventilation are advised, and the comparatively simple plumbing of early days has been supplanted by an elaborateness of apparatus which is complicated, delicate and correspondingly expensive, while difficult to construct and maintain.

There is an equal change in popular sentiment, which has been awakened and alarmed, and has vibrated from a state of thoughtless indifference to as thoughtless solicitude. This is largely due to the writings and lectures of active workers and acknowledged authorities, such as Chadwick, Hellyer, Buchan and others in England, and, in this country, Waring, Wingate, Philbrick, and the *Sanitary Engineer* journal, of New York, but more than all to the alarming accounts of sewer gas poisoning, from no responsible source, which fill the daily papers.

It matters not that these accounts are mostly unverified or rest on *ex parte* testimony which has never been sifted, and would not for a moment endure the scrutiny of legal inquiry. They serve their purpose in providing the public with sensational reading, and hitherto there have been few or none to come forward and challenge their veracity. The public seldom thinks to inquire just what this terrible sewer gas is or how it is generated. It is enough to believe that it is something which *grows* in the sewers, somehow, and then gets into people's houses and makes them sick.

It is probable that this notion is fostered at times by the thoughtlessness, or worse, of physicians, who know very little more than their patients about sewers or their contents, but who find that sewer gas makes such a serviceable explanation for symptoms not readily accounted for otherwise, that they are tempted to resort to it often on slight evidence or none at all. Surpassing charity herself as a coverer of sin, sewer gas is also rapidly supplanting that "Mysterious Providence" which used to afflict humanity in the olden time. This matter occupied the attention of the California State Medical Convention recently, and one of its members openly declared that the medical profession seemed bent on proving "that sewer gases are the real causes of every type of disease," also that "the medical mind is biased in favor of and accepts this as the readiest solution of the question."

In the seventeenth century, the Paris doctors used to say that people who entered its sewers were killed by the stare and poisonous breath of a *basilisk* which lived in them. Two hundred years later, this "chestnut" is revived, only now the basilisk is called sewer gas, and is said to come out and slay its victims instead of waiting for them to enter the sewers.

Never was popular delusion more inconsistent in itself. For instance, diphtheria appears in a house and is charged to sewer gas. Were the same logic employed here as in other matters, or any logic at all, people would reason that if sewer gas were the true cause, the same gas would produce diphtheria in other houses when present, or some disease of the same *genus*. But there is scarcely a malady in the whole catagory, from meningitis to mumps, that is not ascribed to sewer gas. The universal cure-all is yet to be discovered, but the universal cause of disease is now unveiled. Whether it be asthma or anæmia, bronchitis or baldness, croup or catarrh, erysipelas or earache, fevers or fits, goitre or glanders, it is all charged to sewer gas. What a wonderful simplification that introduces in pathology!

There used to be this rule among pupils studying grammar: If you can call a word nothing else, call it an adverb. The rule has now got into sanitary practice, and reads: If you cannot explain a symptom in any other way, charge it to sewer gas. At the sanitary congress in Vienna, five years ago, Dr. Lissauer, of Dantzic, referred to this reprehensible practice, and remarked that "cases of diseases attributed to sewer gas entering the house through defective pipes are really due to prevailing epidemic influences rather than to direct infection."

The daily press is full of sewer gas, fuller than the sewers! Is there sickness at a boarding school, or a summer resort, or on a family's return to their city home, the papers announce the event as "another case of sewer gas." Does the secretary of the treasury weary or lag under the weight of his duties, sewer gas again. It matters little that there has been sickness at schools and hotels, and in city homes or in public office long before sewers were built or sewer gas born; the explanation is none the less convincing. An eastern architectural paper prints a column of frantic fiction about the dreadful antics of sewer gas, and closes with the following rational advice: "Strip your bedrooms of all plumbing whatever; let no sewer connection of any kind come into a sleeping room; go back to the clean, old-fashioned bowl and pitcher, and be content with good health."

This inconsistent and crazy delusion may at any time take a turn which would be dangerous to our profession. Let fatal sickness occur in a new house, for example, and be laid to sewer gas, and then let some sanitary theorist come in to examine the plumbing, and to exalt his profession by finding grave fault with the plumbing because this or that fixture or refinement has not been introduced. What, then, will stand in the way of a suit for damages against the architect who planned and constructed the house? In the present state of the public mind about sewer gas, such an architect's chance with judge and jury might be exceedingly precarious, and it would avail little for him to show that no substantial proof had been adduced of the presence of disease germs in house or sewer prior to the attack.

Moreover, some of our most experienced and most judicious architects would be the most exposed to this peril. Viewing the matter of household sanitation from the standpoint of a practical architect rather than that of a zealous reformer, they regard with mistrust the tendency of extremists to elaborate and multiply pipes and fixtures indefinitely, knowing that every complication increases the cost and difficulty of construction, and the uncertainty of its permanent efficiency. Pipes intended to ventilate traps are apt to clog and cease to act, or, if operative, to hasten the unsealing of the traps by evaporation. Ventilating shafts are liable to down drafts as well as to upward ones. Shreds of cloth and fibers catch on the bend of traps and transfer their contents back and forth by capillary action; wave motion farther unseals them, and, finally, we are told that trap water is soon permeated with gases, and gives them off freely at the other side. Sanitary practice is still rudimentary in its development, and prudent architects are prone to select the simplest apparatus whose value has been estab-

* Paper accepted at the third annual convention of the Western Association of Architects, Chicago, November 19, 1886, and ordered printed.

lished by experience. They are therefore especially exposed to the condemnation of professed experts and reformers in sanitation.

It is an old saying, that there must be fire where there is smoke, but seldom has there been so little fire for so much smoke as in the sewer gas scare. Strictly speaking, sewer gas is a myth—it does not exist, save in the imagination. It has no more place in the chemist's vocabulary than has barnyard gas, or school gas, or church gas, or factory gas. Where sewers are modern and well built, with a good fall and free discharge, the air in them is not likely to differ very much from that above, except in excess of dampness and a staleness arising from deficient ventilation. It is probable that such air can be breathed quite as safely as the air of an ill-ventilated, stuffy workshop, or steam-heated office, or a crowded assembly-room. In St. Louis, a force of men is regularly employed in the sole duty of cleaning out the sewers. Most of their working hours are spent within the sewers or around them. According to popular notions, these men should be the marked victims of disease. In fact, there is not a healthier corps in the city employ than its sewer cleaners. In over thirty years there has been but a single death among them. The same thing is true of the sewer cleaners of Paris, who have enjoyed remarkable immunity—even in times of epidemic.

The air in foul sewers has been subjected to chemical analysis, and found to be very much like other air, with an excess of moisture and carbonic acid, and traces of ammonia and sulphuretted hydrogen. This, indeed, would not prove its salubrity, since contagion defies the chemist's search, but it shows that there is no special substance which can properly be called sewer gas.

Nor is the sewer air always pouring into people's houses, or trying to. Numerous tests of the sewers of Munich, Germany, showed that this draught was generally down the sewer instead of into the house. The tendency was to follow the stream of sewage in its course.

A disagreeable or novel odor in a house is often taken as a sure sign of sewer gas, and unnecessary alarm occasioned. Often enough, the fault is in the hot-air furnace. In Brooklyn, N. Y., three cases of malarial fever were reported in one house, and sewer gas was plainly indicated. A plumber came, therefore, and ripped up the plumbing throughout, but without curing the odor, till he chanced to open the cold air duct to the furnace, when the source of the sewer gas was discovered in the decaying remains of a cat and several rats.

An occasional source of peculiar odors in churches is thus complained of by a Boston clergyman: "The sexton frequently chews tobacco, but whether he chews or not, he invariably uses the register of the furnace as his spittoon. I almost never enter a church or public hall in winter without catching the disgusting odor of burning spittle. Do you know of any mechanical contrivance to be applied to the sexton, to prevent him from spitting down the register?"

Similar illustrations could be multiplied indefinitely to show that when strange odors are discovered, they are more than likely to originate within the premises themselves, and not in the public sewer. In a Chicago residence, a drain became choked with rags, and its contents backed up and overflowed into the cold air duct to the furnace, and thence entered the house.

Were further evidence needed of the unreasonableness of the popular scare about sewers and sewer gas, it could be found in the sanitary statistics, which show that instead of poisoning a community, sewers are conservators of health. In every city where they have been provided, a great improvement has at once appeared in the health reports. For example, the first sewer in St. Louis was built in 1849, the great cholera year. In the next five years there were five successive cholera epidemics, and people began to think the disease had come to stay. Since then, cholera has visited the city but once, and then in a mild form. In Munich, Germany, the deaths from diphtheria in 1880 were most numerous in the unsewered districts, and the same was observed in the epidemic of typhus fever, in 1875.

Country towns, being without sewers, must, strictly speaking, be free from sewer gas. But the sewer gas diseases, so called, are as active there as in cities. A correspondent of an eastern paper thus tells of his country life:

"In 1862 and 1863, I occupied a place in ———, on Long Island, overlooking the noble Sound. Before I went there I took the assurances of several distinguished divines, lawyers, physicians, bankers, merchants and officials who lived there that that particular locality was exempt from chills and fever, though they had it like blazes at ——— and ———. The result was that, leaving me out, my whole family, my servants and all friends who visited us, and I sometimes thought my domestic animals, except mosquitoes, had the disease. I raised such a clamor about it that I was threatened with a ducking in the noble East river, and dared not go back there to live, or to die, rather. I escaped by taking quinine as regularly as I did my meals."

One consequence of this practice of exaggerating the poisonous nature of sewer gas and the assumed difficulty of guarding against it, may be to exalt the office of the sanitary engineer at the expense of the architect and to open the way for the encroachment of the former on the architect's province of designing and constructing buildings. An eastern building paper has already suggested that a government board to select designs and control the erection of public edifices would not be complete without a sanitary engineer to look after the plumbing and drainage, since architects were not competent to perform this duty properly. The same journal has attempted to fortify this accusation by citing several state capitols and other buildings whose plumbing is pronounced defective, when it is notorious that all the best buildings in the country, with scarcely an exception, are the work of architects throughout; that the old buildings cited were, undeniably, on a par with the sanitary knowledge of their day, and that the defects now observed have chiefly been noted and are now being corrected by architects.

In view of the foregoing, it seems clearly the duty of architects to give their serious attention to the sewer-gas scare and its possible consequences. Those who are in any respect unfamiliar with modern plumbing, its

nature, methods and requirements should inform themselves without delay by the study of standard authorities, conference with intelligent master plumbers, and diligent inspection of work done under their own observation. Then let them observe the empty character of the prevailing delusion and exert their influence to abate it by explaining, as occasion may offer, the operation of sewers and the usually innocuous character of the air within them and the efficiency of the means generally employed to shut it out of houses. Particularly should they beware of assenting to the assumption that architects are no longer competent to direct the plumbing of modern houses without the assistance of a professional sanitary expert.

Twenty years ago, when the science of ventilation occupied the public attention, it was the custom to talk about the deadly carbonic acid gas much as people now talk about sewer gas; and a good deal of sickness was ascribed to it which we now believe had some other origin. A similar termination may be anticipated to the sewer-gas fright as people become better informed about sewers and their workings and perceive how little foundation there is for the sensational talk which is now so common.

Hospitals for the Insane.*

BY E. H. KETCHAM, ARCHITECT, INDIANAPOLIS, IND.

TO me has been assigned the duty of discoursing upon the subject of Insane Hospitals, not because my sanity is in question, I trust, but on account of my connection, professionally, with the erection of what is to be known as the Northern, Eastern and Southern Indiana Hospitals for the Insane.

The necessity of additional hospitals became apparent when it was known that of the two millions of people within the boundary of the state, 3,530 are insane, or one in every 558. (According to Dr. Kiernan, I find that the ratio of insane for Cook county, Ill., to be 1 to 390.)

The nearly completed hospital at Indianapolis would accommodate 1,400; there were in jails and poorhouses 800, and at home 2,000.

To give an accurate definition of insanity would require a detailed account of each individual case, so great is the variety.

I can give only as a guide, one of the many to which my attention has been called, viz: "A condition of the mind in which a false conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts, have separately or conjointly been produced by disease."

You are fully as well posted with the antiquity of this disease as I am. In the early ages the masses believed recovery impossible, and had the unfortunates confined in dungeons and prisons. In later years those who were deeply afflicted were confined in jails and almshouses, while those of a milder type, such as quiet, harmless and working lunatics were given to the care of cottagers.

The hospital systems in use at the present time are:

First: The corridor system.

Second: The house system.

Third: The pavilion system.

Fourth: The cottage system.

First: The corridor system is in most general use. Formerly it consisted of a very wide corridor with bedrooms or dormitories on either side, with bathrooms, wardrobes, water-closets, parlors and dining rooms close at hand; frequently a portion of the corridor was used for dining rooms. It is easily observed that the lighting of such a system would be very imperfect.

A change has been made, especially in England, so that the corridor occupies one side of the building and the bedrooms or dormitories the other.

Dr. Kirkbride, of Philadelphia, for many years at the head of the Pennsylvania Hospital, made a decided change for the better, introducing what is now known as the Kirkbride plan. This consists of wards arranged *en echelon*. The ends of the corridors terminate in large windows and often intermediate, a few bedrooms give place to neat alcoves. This gives light and air and produces decidedly more cheerful quarters for the patients by day. Wards are connected at the corner with adjacent wards by means of a hall commonly made fireproof, through which ingress or egress can be made, or communication from ward to ward.

Some of the best of the Kirkbride plans can be found at Danvers, Mass.; Indianapolis, Ind., and Pontiac, Mich.

In all American institutions the administration quarters are located at the center. To the rear will be found the boiler house, laundry, shops and other necessary buildings.

Second: The house system has a more complete separation of day and night rooms. During the day the patients are quartered on the ground floor, while the second floor is used entirely for dormitories. When patients are unable to ascend the stairs, sleeping apartments are provided on the ground floor.

Third: The pavilion system is essentially the same as the house system, being more extended in its parts, however.

Fourth: The cottage system consists of a number of small buildings, with accommodations for fifteen to twenty patients, made in all respects and general character of design like private dwellings.

Of late, a strong tendency has been to do away with restraint—to indulge the patients as much as is practicable and to give them employment, that their minds and bodies may have exercise. In the three Indiana hospitals, this consideration has been carried beyond that of former institutions. Great effort has been made to make each one a home, not a prison.

In the selection of sites, farms were purchased susceptible of cultivation, beautiful in topography and surroundings, 281 acres for the Northern, 306 for the Eastern, and 160 for the Southern.

It is the intention to employ those who are able, in the working of the farms, in the kitchen, laundry, boiler house, and as housekeepers.

* Paper read before the third annual convention of Western Association of Architects held at Chicago, November 17, 1886.

In each instance, where restraint has been removed, a more cheerful disposition has developed in the patients. In a visit which I made to the Alabama Hospital for Insane, at Tuscaloosa, where this idea is carried out, with the exception of the few sick ones, I found it impossible to discriminate between the patient and attendant.

The pavilion system was selected for the Northern Hospital, near Logansport.

The cottage system, for the Eastern Hospital, near Richmond. And the congregate radiate house system for the southern hospital, near Evansville. This system has often been used with success for prisons and libraries, but never before has it been undertaken for insane hospitals.

The Northern Hospital, a group of two-story detached buildings, occupying a high bluff overlooking the Wabash river. The center building is devoted to the use of the administration. The first floor is set apart for offices and public reception rooms; the second floor to the living apartments of the superintendent, his family, and the assistant physicians. To the east, for women, and to the west, for men, is a series of five buildings, separated from each other by an open space of fifty feet.

The first pavilion, known as No. 1, east and west, is set apart for the reception of patients, who are quartered here until they can be classified. A hall extends the full length, with bedrooms, bathrooms and wardrobes on either side. At the center on the north side or front, is a dining-room, with necessary scullery; to the south side a large "day room," or a room set apart for the day life of the patients; two small parlors are provided where the patients may be entertained by their friends, a loggia for open air exercise, during the summer, which, during the winter, is closed with sash and glass, giving additional accommodation.

Pavilions Nos. 2, 3 and 4, east and west are duplicates in plan and design, and are set apart for the convalescent, demented, suicidal and epileptic cases. It is in these buildings that the second floor is used for dormitories, and the first floor for "day rooms."

At the extreme ends are pavilions Nos. 5 east and west, for the noisy and incurably insane, each of which has an independent bedroom.

Each of the above-named buildings is provided with bathrooms, wardrobes, water-closets, dining "day rooms" and attendants' rooms, from which a strict watch can be had over the patients.

To the rear of the administration building is a large building for the employes, main kitchen, bakery, refrigerator, and amusement hall (a neat little theater), for dancing and other amusements.

A laundry with all modern improvements, and a boiler-house of four one hundred horse-power Babcock and Wilcox boilers; a sufficient room for the necessary engines and electric lighting occupy a lower level, to the extreme rear.

The Eastern Hospital.—The cottage system is yet somewhat of an experiment, especially where the cottage idea is so fully developed.

The cottage system of other institutions are what we term the pavilion system of the Northern Hospital. Here every effort is made to imitate the dwelling house as far as possible, differing only in that the small bedrooms give place to dormitories.

The main group consists of four buildings about an open court; at the center and a little to the front is the administration building, differing from that at the Northern Hospital only in plan and character of design. To the right and left are two wings; east for women, west for men. They are counterparts of each other, and serve the same purpose of pavilions No. 1 east and west, at the Northern Hospital. The kitchen, employes quarters, amusement halls, etc., form one building in the rear, which is essentially the same as the rear wing hereinafter described as the rear wing of the Southern Hospital.

To the rear and beyond the ends of the main group to the east and west, is a series of cottages, arranged and classified as the pavilions of the Northern Hospital. The boiler house and laundry form the center, and are in architectural construction the same as those for the Northern and Southern Hospitals.

The Southern Hospital, a three-story building, consists of a center building, 59 by 102 feet, from which six wings radiate, at an angle of 60 degrees. To the south is the administration building, separated from the main building on the ground floor by an open driveway, and connected with the main building on the second floor by a covered corridor.

The administration building, while differing from the above-named hospitals at Logansport and Richmond in plan and design, has the same use. The center building is so divided that there are four offices in the four corners; patients' reception room, matron's and steward's rooms, and the dispensary. A corridor ten feet wide separates these offices and side walls, from the foundation piers of the dome. At the north end of the dome is a broad slate stairway, leading to a platform, then to the right and left landing on the second floor, at the foot of stairways, leading to the third and attic floors; under the main stairs access is given to the basement.

The southeast and southwest wings are counterparts through the three stories; a small hall communicates to a dining-room, 20 by 32 feet, off of which is a large scullery, communicating with the basement by hydraulic hoists. Passing through the dining-room a long corridor is reached; on either side are bedrooms for the patients, wardrobes, bath and attendants' rooms. The corridor is placed to one side of the center, in order to give single rooms to the refractory patients, while the mild and quiet are given small dormitories where they may sleep. The attendants' room and bath-room are in direct connection with the "day room," which occupies the extreme end of the wings.

At the outer corners is a parlor, and the stair hall communicating with the wards and garden or court below. A loggia between gives additional room for the free use of patients. An air duct is extended from the basement to the dome above, that fresh air may be brought from the open air to the basement where it is warmed and sent to the rooms through air ducts in the walls. In no instance does the warm air enter the sleeping rooms direct, but into the corridors, then to the sleeping rooms through open panel doors. At the far end of the rooms shafts are provided

whereby the foul air is taken to the attic, whence it is expelled into the open air.

The fourth story of the "day room block" is used as dormitories for employes.

The wings to the northeast and northwest, differ from those described, in that they are set apart for more quiet patients, and the sleeping rooms give place to dormitories.

The rear wing to the north, contains officers' and employes' dining room, kitchen, sculleries, sleeping rooms, and amusement halls. In the basement under the amusement halls, is the main kitchen and serving room, with refrigerator and bakery on either side, while store rooms occupy the remaining space. The portion of the second story not used by the amusement hall, is given to employes' sleeping rooms.

In the upper portion of the dome, ten water tanks of 2,000 gallons capacity each, are placed, from which water is distributed through the building.

Water-closets wherever used, are placed without the building and connected thereto by a small passage, rendering it impossible to the introduction of foul air.

The boiler house and laundry are independent buildings, located to the rear of the main building some ninety feet, and are equipped as that described at the Northern Hospital.

The construction is not over massive, yet every effort has been made to secure proper strength. Hard blue limestone foundation to the grade line; a neatly bush-hammered water-table divide it from the heavy brick walls above; in no instances are there brick walls less than thirteen inches. Flues for hot and foul air nine inches thick.

Stud partitions are studiously avoided, yet a few occur for closets; they consist of 2 by 4 inches dressed studding laminated.

The floors are of 2 3/4 by 8 inches dressed material, beaded and slip-tongued, laid flat, and supported by substantial beams. Walls are corbelled to receive the wall-plates. The base, of 4 by 4 inch oak, coved, that all dust and dirt may be easily removed. On top of this massive floor is placed the deafening, then maple flooring in narrow strips; the roof is similarly constructed of lighter material, forming the well-known slow-burning fire construction. Brick row lock-arches of red mortar and frequent pilasters; panels, belt courses, hip and ridge coping, finals, and gutter mold, each of terra-cotta and slate roof, form important features.

The interior finish is of oak, oiled. The interior brick walls, except those of the Administration building, officers' dining room, and the small bedrooms for patients, are painted, producing a very pleasing effect. The paint prevents the absorption of disease germs.

Open panel doors are used in order that the patient may not be disturbed by opening and shutting of doors.

The iron sash and bars have given place to strong wood sash, and bessemer wire screens.

Chief Webster, of the Indianapolis Fire Department, gave it as his opinion, that should a fire be started in the center of the Southern Hospital and be permitted to burn uninterruptedly, that a week would be required to totally destroy the building.

The disastrous fires of the past warn us for the future. Having such a construction, we have adopted such means as may be readily used to a great effect without serious damage to the building.

In addition to the customary hydrants and hose in and out of the buildings, chemical engines, such as city fire departments use to a great success, have been adopted. After careful examination, the commissioners have purchased what they consider the best, namely: Two dozen six-gallon Champion Extinguishers for each hospital. In addition to these, they have purchased for each, the Northern and Eastern Hospitals, a portable Champion Chemical Engine of one hundred gallons' capacity.

As the compactness of the Southern Hospital does not necessitate the portable engines, two chemical tanks or stationary engines, each of five hundred gallons' capacity, are placed in the basement of the dome, from which standpipes rise to the attic; branches at each floor supply hose of sufficient length to reach the extremes of the building. A small bell-pull at each hose box sets the tanks into immediate action, and, as has been demonstrated, twenty seconds only are required to produce a fire stream.

Heating, ventilating, lighting, sewerage, and water supply, I beg to omit at this time, yet trust I may have the pleasure of presenting to you at some future date, through the columns of THE INLAND ARCHITECT AND BUILDER.

Association Notes.

WESTERN ASSOCIATION OF ARCHITECTS.—Convention will be held November 16, 1887, at Cincinnati. J. F. Alexander, La Fayette, Ind., secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Saturday of every month, at 15 East Washington street, Chicago. Annual meeting first Thursday in October, 1887. Clarence L. Stiles, Chicago, secretary.

INDIANA STATE ASSOCIATION OF ARCHITECTS meets on the fourth Wednesday of January, April, July and October of each year. Annual meeting fourth Wednesday in October. E. H. Ketcham, Indianapolis, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at St. Louis on the second Tuesday in January, 1887. Thomas B. Annan, St. Louis, secretary.

KANSAS CITY SOCIETY OF ARCHITECTS meets Monday afternoon of each week, at 4 o'clock. Annual meeting second Saturday in April, 1887. F. B. Hamilton, secretary.

BUFFALO SOCIETY OF ARCHITECTS meets first and third Tuesdays each month. W. W. Carlin, secretary.

THE ARCHITECTURAL ASSOCIATION OF IOWA, annual meeting, second Wednesday of January, 1887. C. H. Lee, Des Moines, secretary.

THE ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 4, 1887. Irving W. Kelley, Minneapolis, secretary.

KANSAS STATE ASSOCIATION OF ARCHITECTS meets at Topeka on the third Tuesday of January, 1887. H. M. Hadley, Topeka, secretary.

ASSOCIATION OF OHIO ARCHITECTS meets semi-annually. Next meeting third Thursday in January, 1887. O. C. Smith, Cincinnati, secretary.

ASSOCIATION OF TEXAS ARCHITECTS meets at Austin on the third Tuesday of January, 1887. S. A. J. Preston, Austin, secretary.

NEBRASKA STATE ASSOCIATION OF ARCHITECTS meets first Wednesday in January, April, July and October each year. F. M. Ellis, Omaha, secretary.

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday, Builders' and Traders' Exchange. W. G. Williamson, secretary.

THE WESTERN SOCIETY OF ENGINEERS meets the first and third Tuesdays of each month at 4 o'clock P.M., at 15 East Washington street, Chicago.

THE MASTER PLUMBERS' SOCIETY, of Chicago, meets first and third Wednesdays of the month, 7:30 P.M., at 15 East Washington street.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The second annual meeting of the Chicago Architectural Sketch Club convened at the club rooms in the hall of the Builders and Traders' Exchange, November 8, and was followed November 15 by the inauguration of an annual exhibit of club drawings and annual banquet. On this occasion the members of the club and invited guests numbered sixty, and the evening was devoted to social enjoyment. The menu, which was furnished by Werner, was excellent, and the exhibit of drawings, about 200 in number, was a surprise to all but those who have watched the advancement of the club for the past two years.

The invitations were limited to members, the directory of the exchange and the three architects who have acted as committee upon the adjudication of club competitions.

Among the guests present were John M. Root, F. L. Blake, William Grace, Thomas Sollitt and C. U. Trowbridge. Letters of regret were received from George C. Prussing, F. S. Wright, T. C. Schonthaller, W. L. B. Jenney and George Fox. Among the members present were the following: Harry Lawrie, W. G. Williamson, C. A. Kessell, George Beaumont, J. H. Carpenter, I. K. Pond, M. H. Church, R. C. McLean, Paul Muller, Fred. R. Hirsch, T. D. Hetherington, W. R. Gibb, Frank Lively, T. O. Fraenkel, O. R. Enders, R. B. Williamson, C. W. Trowbridge, Richard Wood, R. E. Schmidt, F. L. Linden, E. J. Wagner, W. B. Mundie, C. F. Jobson, O. C. Christain, Ashton Pentecost, J. C. Coxhead, R. M. Turner, J. C. Batchen, A. C. Berry, F. L. Blake, W. B. Lord, H. W. Culbertson.

After the elaborate menu had been disposed of, President Lawrie arose, and in a pleasing manner reviewed the history of the club, its work and its objects. He spoke of the members' improvement in art and architecture. President Lawrie then announced the toasts, which were responded to as follows:

"The Architect," John W. Root.

"The Builders and Traders' Exchange," William Grace.

"THE INLAND ARCHITECT," R. C. McLean.

"The Sanitary News," H. W. Culbertson.

"The Chicago Anderson Pressed Brick Company," F. L. Blake.

Mr. Root's response was an unusually fine address to the draughtsmen. It will long be remembered, and merited the enthusiastic manner in which it was received.

Mr. George Beaumont in a graceful speech proposed Mr. Root for honorary membership, to which Mr. Root responded in an appropriate manner.

At the conclusion of the speech-making a varied and entertaining program was enjoyed. Mr. Enders gave an exhibition of the black art; Mr. C. F. Jobson sang "The Flying Dutchman;" a piano solo by Mr. Root; Mr. Lawrie sang the "Village Blacksmith;" Irving K. Pond gave a Shakesperian recitation; R. B. Williamson sang "By the Sad Sea Waves," and W. R. Gibb gave a humorous speech, "The Labor Question."

MASTER CARPENTERS' AND MANUFACTURERS' OF WOOD BUILDING MATERIALS ASSOCIATION.

On Friday evening, November 12, the association held an informal meeting at which a grand lunch was spread. The evening was given over to having a general good time, and speech-making by the members present.

At the the regular meeting of the association held at 15 East Washington street at 3 P.M., November 16, President Frost presided. Attendance good.

Minutes of last meeting read and approved.

Mr. Hearson moved to change Sec. 13 of the by-laws to read "that the regular meetings of this association shall be held on the second Thursday of each month at 7:30 P.M." Carried.

Mr. Grace moved that that part of Sec. 14 relating to number constituting a quorum be changed to read, "that seven members constitute a quorum." Carried.

Mr. Cassell moved that the chair appoint a committee of three to confer with committees from all other contractors' associations connected with the building trades, for the purpose of adopting some code of working rules for the coming year satisfactory to all, and report to this association before final action.

The motion was carried, and the chair appointed Messrs. Wm. Grace, Wm. Hearson and Oliver Sollitt.

The meeting then adjourned, to meet Thursday evening, December 9, at 7:30 P.M.

Our Illustrations.

Sketch-book Series No. 1, by Harry Lawrie. Bits of Scottish architecture.

Church for Methodist Episcopal Congregation, South Park avenue, Chicago, by L. B. Dixon, Chicago.

Hotel for Ruffner Brothers, Charleston, West Virginia, by James W. McLaughlin, Cincinnati; four stories and entresol, 100 by 157 feet; pressed brick, trimmed with Kanawha freestone. Cost \$100,000.

Residence for E. B. Mix, at Aurora, Ill., by M. L. Beers, architect, Chicago. It is 32 feet 6 inches wide by 48 feet long; two stories, attic and cellar; finished throughout in clear pine, finished in the natural wood. The exterior is shingled all over; the sides with ornamental and square butt dimension shingles, half and half. The house, as planned, includes all modern improvements.

Block of three dwellings for Edwin B. Sheldon, Chicago, by Burling & Whelehouse, architects, Chicago. Colorado red sandstone is used for basement and first story and trimmings. The remainder of the walls are of dark brown terra-cotta, brick 1½ inches by 4 inches by 12 inches, made by the Perth Amboy Terra-cotta Company; bay windows and corners of copper. Cost about \$40,000.

Business block for Henry G. Foreman and Henry A. Kohn, by Bauer & Hill, architects, Chicago. The building is situated on the southwest corner of Adams and Franklin streets, is 100 by 125 feet, eight stories and basement high, a total height of 134 feet from the street level. The materials are St. Louis pressed brick, blue Bedford stone and terra-cotta, slow burning construction. A light court is in the southwest corner, under which is placed the boilers and steam heating apparatus. The building was commenced July 22, 1886, and is under heavy bond to be finished January 1, 1887, which will be done. Cost about \$200,000.

New Publications.

MURAL PAINTING. By FREDERIC CROWNINSHIELD. Illustrated; price \$3. Boston: Ticknor & Co.; Chicago: A. C. McClurg & Co.

The series of papers lately published in the *American Architect*, on mural painting, by Frederic Crowninshield, have been issued in book form. They present an attractive appearance, and the matter has been carefully prepared. The different methods of wall decoration are discussed historically, technically, and pictorially. The large field for mural painting is to be found not alone in temple, capitol, and theater, but in our railroad stations, public halls, mammoth hotels, costly restaurants, vast stores, etc. The dignity of mural painting makes it impressive to even the uncultivated, and "art, like religion, should be an every day affair." Mural painting, as the writer defines it, means figure work, combined with conventual ornament, or design, where free imagination dominates the rule and compass. "Decorative art" has become among many artists a term of reproach. Phidias and Michael Angelo would be much surprised were they to return at the present time and find themselves not classed among first artists. The ideal school for the mural painter must have been the studio of the Renaissance, where practice and precept were properly combined. In the chapters on "Modern Encaustic," "Durability of Fresco, and its Present Possibilities," "Oil Painting," and "Water Glass," will be found explanations of these different methods, clear to either professional or amateur, and the general reader will find interesting, those on "Byzantine, and Mt. Athos," "Oil Painting," and "Byzantine Fresco." The limited number of illustrations is owing, as the writer says, to the difficulty in reproducing the peculiar qualities of mural painting. There are, however, thirty-five small figures in the text, and twelve beautiful full-page heliotype illustrations, selected to present the finest specimens of mural work under each method, and a history of their location, merits, etc.

The illustrated catalogue of artists' materials and drawing instruments issued by Wadsworth, Howland & Co., of Boston and Chicago, is a very neat book of 150 pages, well calculated to serve the purpose for which it has been published. It is liberally illustrated throughout, and the exhaustive lists of the almost endless variety of goods are so well arranged as to make it of the greatest practical value to the prospective purchaser. In it he can readily find all that his present needs may demand or his future requirements suggest. It should be noted that though the firm were established in Boston in 1845, their Chicago house, at 190-192 Michigan avenue, has been less than two years in existence, and is one of the late and important acquisitions to Chicago. They have recently completed the alterations in their establishment which a larger space necessitated, in order to accommodate their large stock of artists' materials, mathematical instruments, and architects' and engineers' supplies. They keep in their Chicago house a stock similar to that carried by their Boston establishment, which, as a glance through their catalogue will show, embraces a complete line of materials for oil, water color, and china painting and drawing in all its branches. In this connection special mention is made of their line of studies for flower, landscape, animal and marine painting. Through their English, French and German agents they are able not only to keep up their immense line of staple goods, but also to add all the latest novelties to be found at home and abroad. Having recently taken the agency for one of the largest foreign manufacturers of mathematical instruments, they are carrying a full line of Altneder's and Swiss makes. The special attention of artists and amateurs is also called to Le Mesurier artists' tube colors. These artists' colors are the same in first shades, and will produce absolutely the same tints as the best English tube paints, possessing superior body and strength in the body colors and unsurpassed transparency and brilliancy in the transparent colors. Altogether the catalogue is one that artists, architects, engineers and the kindred professions will find of great value as a reference book, which they can consult with profit, and from which they can order with accuracy any of the various goods in which they are interested.

Third Annual Convention of the Western Association of Architects.

HELD AT CHICAGO, NOVEMBER 17, 18 AND 19, 1886.

The convention was called to order by President Dankmar Adler, who read the following address:

THE PRESIDENT'S ADDRESS.

Gentlemen and Brother Architects:

Before opening this convention, I wish to address you as president of the Illinois State Association of Architects, and in its name to thank you for the honor you have conferred upon our association and upon this city by again gathering here from all parts of the great West to your annual reunion, and to beg you to receive our attempts at entertainment, and our tenders of hospitality, as the best that our limited power enables us to offer. We wish to assure you of our highest esteem, of our friendship and fraternal regard, and we give you a most cordial welcome. We trust that our efforts to make your attendance at this convention agreeable and pleasant may find such favor in your eyes, and that the work of this convention may be so successful, that we may look forward to a speedy return of the pleasure and honor you have conferred upon us by assembling here to-day.

My friends, seeing assembled before me the men who have made and are still making a most eventful epoch in the development of architecture, I cannot find words to express the feelings of gratitude, of pride and of self-congratulation, which force themselves upon me as I realize how great is the privilege granted us in being part, not of a Renaissance, but of a naissiance in architecture. For there is surely being born into our world a new style, the style of America, the style of the civilization of the nineteenth century, developed by its wants, its conditions and its limitations, and nurtured by the best there is in the lives of you whom I see before me and of your confreres at the East.

The taunt, "Who reads an American book?" has long since been answered. The American book is read with eagerness wherever the English tongue is spoken; it is translated and read by every people possessing a literature.

Great and glorious as was the rise of American literature, the development of American architecture is still more wonderful.

Literature may thrive in a time of "plain living and high thinking," but the growth and development of architecture can only begin among a people possessed of sufficient wealth to permit indulgence in luxury and elegance. While in literature the plain liver and high thinker may, amidst privations and want, evolve from his stores of knowledge thought and imagination, pages that will circulate among and enrich all mankind, the architect cannot see the fruition of his thought and imagination without a client, nor can he acquire experience and skill to develop and utilize his gifts without a clientele. The first work of even a great author may be and may ever remain his best. The first work of the good architect never is the equal of his subsequent works. Compare Richardson's Church of the Unity at Springfield or his American Express building at Chicago with the Easton town hall, the Marshall Field building, or the Pittsburg Court House; compare Post's Troy Savings Bank with the Produce Exchange; compare Root's Riddle House with Byram House, or his Grannis block with the Insurance Exchange or the Rookery building, for proofs of this assertion. The literature may acquire polish and fluency, and facility of expression, as he continues to write, but originality and depth of thought and wealth of living ideas are independent of and frequently in inverse ratio to the number of his published works. But the successful architect cannot take abstractions of thought or figments of the imagination and transmute them into buildings. He must take the wants and conditions, the thoughts and the feelings and longings of his client, together with the limitations imposed by financial considerations and peculiarities of environment, and collating these with his knowledge, his imaginings, his longings, apply his skill, tact and adroitness to produce a structure that shall satisfy at once client, architect, and the critical public. Many experiences and efforts implying the necessity for a multiplicity of clients are required before the architect can satisfactorily develop the mental, spiritual and moral faculties and attributes necessarily employed in such work. And that this development extend to the utmost limits, it is necessary that the individual architect have rivals whom he must emulate, and that there be among clients an emulation in the desire to erect good buildings. Hence the architect, and with him architecture, can only thrive in a community in which wealth has begun to accumulate.

Of the great American men of letters who, reared amid the hardships and primitive environments of the first half of this century, had the ruggedness necessary for the struggle which ended in the establishment of American literature as the equal of that of any country, Emerson, Longfellow, Hawthorne, Irving and Prescott have passed away, and Holmes, and Lowell and Bancroft cannot be much longer with us, and with them a glorious epoch of American history is passing away; while the newborn American architecture is still in its infancy, its first struggle for existence having begun within the recollection of almost the youngest among us, in the era of material prosperity which followed the rapid development of our railroad, telegraph and industrial systems since the close of the war of the rebellion. In fixing the birth of American architecture at so late a date, I ignore the work of the European architects who made America their home and transferred the methods and manners of their old world practice to our shores, and who reproduced the styles of other lands and other ages with academic fidelity and accuracy. Their work though good, was not American. It was engrafted upon, not rooted in the life of the American people. Such works as theirs, while requiring a knowledge of the art of building as developed among other nations, with wants, with thoughts, with means, conditions and

environments different from our own, necessarily involves more or less disregard of our own mental and material wants and resources. And yet, though this work was un-American, the influence of its authors on American architecture proper was of the best. By them our own young architects were directed to the study of the best examples of the architecture of the past, and were thus given a store of knowledge of the utmost value in their task of solving the great problems set before them in this age of development and progress.

And thus the masters of the new American school show, even in their most American work, the fruits of their studies of the styles of bygone civilizations. But how free and original is the application of their European studies to the exigencies of America! How American is Post's Italian of the Produce Exchange! How American is Richardson's reproduction of the somberness and dignity of the Palazzo Strozzi in the Marshall Field building! How American the application of Indian motifs in Root's ornamentation of the Rookery Building! How American are Sullivan's reminiscences of the training of the Ecole des Beaux Arts, as reproduced in his work! And thus I might continue indefinitely, and with the results of the growth of less than a quarter century—a growth and development so virile as to have called forth from foreign critics of highest standing such remarks as this, taken from the pages of various French journals devoted to the interests of our profession:

Thirty years ago there were, perhaps, throughout the entire United States of North America ten edifices of such nature as to call forth the serious approbation of the European architect. What a change today! There has been progress with a speed that can only be likened to that of the locomotive running under full steam. The United States has become in the past thirty years a country where Europe should seek its models. The progress in architecture has been truly extraordinary, France, England and Germany having each had their share in influencing this growth. The traditions of Europe are for the American like an orange, from which he sucks the juice and throws away the rind. It is a question of high pressure, and the American works at high pressure. But one cannot in full justice judge of American architecture solely by the few specimens of it which we publish. Its vitality is so great that it requires many illustrations to give even a faint idea of it. We can cavil at certain details, but we must doff our hats to the result as a whole. *Chers confreres*, here is art well understood! Bravo America! Go ahead, hurrah!

But all of these complimentary and enthusiastic remarks appear to apply to our private architecture only. The authors of the various articles from which I have quoted are careful to exclude our public buildings from favorable mention. And critics of other nationalities and the most judicious in our midst agree with them. And, proud as we are of our progress, gratifying as have been the results of our efforts in the development of private architecture, our success in that field would have been immeasurably greater if the design of the structures which are supposed to typify the dignity and grandeur of our states, our counties and our municipalities did but approximate that ideal perfection which the mind naturally assumes as one of the essential attributes of such works.

If the sprightliness and grace, the vivacity and hopefulness characteristic of the infant American architecture are to develop into virility, dignity and serenity, these higher qualities can only be attained by the application to the great civic works of the same talents, the same efforts—exerted only in greater degree—that have made our private architecture what it is. That these are not applied is evident, and to determine why this difference, why the greater and better talents and efforts are applied to the minor work, let us compare the system in vogue in the management of both classes of work. In public work we find an alleged competition, in private practice the real competition. In the first case, as the result of the so-called competition, a picture, or at best a plan, a mere shadowy presentment of partly evolved ideas, is premiated and made the basis of the work to be executed; in the other case, a living architect is selected to evolve and carry out living ideas.

The private citizen about to build seeks out an architect who has, in his opinion, distinguished himself in the execution of work of the kind contemplated by him, or he entrusts his interests to one with whom his social or business relations are such as to produce that degree of familiarity and intellectual affinity which pave the way to a mutual understanding of the wants, conditions and limitations of the proposed undertaking. Thus all conditions are favorable, the architect selected is familiar with the kind of work to be done, easily impressed and impregnated with the wants, ideas and sentiments of his client, and the resulting architecture becomes in the aggregate the expression of the material wants and artistic longings of the mass of clients, i. e., the American people, as understood and expressed by the American architect with that intelligent and artistic use of the means and appliances at his command which have excited the admiration of our transatlantic confreres. Therefore, long life to that free competition in executed work, that process of natural selection and that consequent preponderance of the fittest which have in so short a period produced such glorious results, which have given American private architecture so high a standing in the artistic world. But perish that system of mock competition which during the past quarter century has done so much toward lowering the quality of our public buildings and which blocks the way to the highest development of our architecture.

But it is by active work, not by phrases, that we must endeavor to eradicate an evil that seems so deeply rooted and as widely spread as this one.

Before attacking the sham competition as applied to large works, let us extirpate the occasional lapses into this practice in the conduct of private buildings. To do this successfully, we must enforce upon the public an understanding of the fact that the functions of the architect are the application of his knowledge, taste and skill to the interpretation of the wants of his clients into the language of actual, erected buildings, and that his plans are but means employed for the attainment of this end; that in no case is the architect a vendor of plans. When this is once generally understood we will have no more of the now prevalent idea, that as the merchant in competing with his rivals exhibits samples of his wares, so the architect should push his fortune by exhibition to possible customers of samples of the plans he may have on sale. If it is said that the tyro in architecture has no stock-in-trade but the tentative plans and sketches he may make and exhibit to possible clients, I reply that if he has properly qualified himself for the work he proposes to do by long, faithful and diligent service in the

employ of eminent practitioners, he will have identified himself with the design and execution of so much creditably executed work that he can safely point to this and to his apprenticeship as qualification for the confidence which he asks of the friends whom he ought by this time to have made. Let him remember that his standing will be higher, and therefore his emoluments will be higher from the beginning of his career if he claims recognition as the possessor of knowledge and skill, and of judgment to apply them, than if he degrades himself into a peddler of plans, craving, hat in hand, an inspection of his stock of sample sketches. Of course, the direct application of all this is chiefly to small and unimportant work; but we should carefully guard against a lowering of the *morale* of the recruits in our ranks, as this is a matter of vital importance to the maintenance and elevation of our own *esprit de corps*, and to our relation to and standing in the outside world.

We should take pains to demonstrate that if the experience and skill of several architects in dealing with a given problem are equal, the greater the degree of mental intimacy and familiarity existing between clients and architect, the better will be the resulting work. In the case of competitions, the immediate personal contact and intimacy, the free interchange of ideas between projectors or owners of the proposed buildings and the competing architects becomes, to a great extent, an impossibility. The more fair, the more honest the competition, the more complete the isolation of client and architect. Hence the resulting designs can only attain academic perfection, and will be deficient in the sympathetic, life-giving qualities, which implies a loss to the owners of the building, to the public at large, and to our profession, and architects as a body expend so immense an aggregate of labor and money upon such competitions, which yield, even when instituted under the most favorable auspices, comparatively small and unsatisfactory results.

A recent instance, still fresh in the minds of all of us, illustrates the futility and wastefulness of what is recognized as one of the best and most ably conducted of this class of compositions. The authors of the accepted design in this competition state "that they began a study of the problem by laying out all the plans they could devise for such a building and such a lot. Their value as to exterior light was then compared; and the one herewith submitted giving the best results was therefore chosen." That is, they did precisely what they would have done had this work come to them in their ordinary practice, but they lost the advantage which the influence of the personal magnetism of the chief promoters and managers of the project would have given, and thus the owners of the building do not obtain as good a result as they would have secured had they at once, without the roundabout method of competitive plans, recognized the superiority of these or perhaps other architects in their continuous competition in the erection and administration of actual buildings. And how is it with the cost to the profession of this model competition? Forty-seven architects expended an aggregate of probably \$25,000 in cash or its equivalent, and an aggregate of vital energy worth many times as much if applied to the prosecution of their legitimate business, and all for the chance that one of their number be given the opportunity to earn by hard work and the further expenditure of \$7,500 the sum of \$20,000, and the glory of having vanquished his fellows in a fair and open combat.

And this is the best, almost the ideal competition.

Can such a method of conducting our business be conducive to the elevation of the best interests of our profession, or of the public whom it serves? I deny it, and I believe the more thoughtful among you agree with me.

But in the case of our public buildings, erected for the national government, the state governments, our counties and municipalities, the temptation to nepotism and subversion of political patronage to improper ends is so great, and architects as a body are probably so much more in sympathy with the actual owners of such buildings, namely, the American people, than are the office-holders and dispensers of patronage, with their short and insecure terms of office, that a free and general competition, honestly and intelligently conducted, seems the best means of securing results satisfactory and creditable to the people and to our profession. That these competitions be rescued from the slough of corruption into which they have fallen, that they be made so that the best architects in the land will consent to participate in them, that the buildings produced by them become the pride of our nation and of our profession, is a task to be performed by this and kindred organizations. It is a task of stupendous difficulty. Its successful performance will require united, steady and persistent effort on the part of each and every individual in our associations and by the associations as a whole. It may be many years before we succeed, but succeed we must. That sympathy and understanding between the average American architect and the average American client, which have created American architecture, as applied to private buildings, can and must be extended to produce a civic architecture as stupendous and as perfect in its expression of the genius of the American people as was the art of the Egyptians, of the Greeks and of the Romans, and as fervid and emotional as the Gothic of the noblest types. To accomplish this we must be united and true to each other, so that we may influence for good not only the national and other legislative bodies, but the great American people, which creates and moves them all with a resistless power which no amount of corruption can long withstand. This is our task, partly formulated at our last convention. Let our work at this convention be in furtherance of this great and noble end.

Gentlemen, I thank you for your attention, and hope your deliberations of the next three days may be characterized by that harmony, wholesomeness and breadth of purpose which were so conspicuous in our preceding conventions.

The President: The third annual convention of the Western Association of Architects is now open for business. Mr. Secretary will please call the roll of members.

Secretary John W. Root then called the roll, and the following members responded: D. Adler, R. C. Berlin, W. W. Boyington, L. D. Cleveland, A. Druiding, Henry Lord Gay, William Holabird, W. L. B. Jenney, H. S. Jaffrey, Paul C. Lautrop, Normand S. Patton, C. M. Palmer,

S. M. Randolph, John W. Root, Louis H. Sullivan, L. J. Schaub, J. E. Silsbee, S. V. Shipman, S. A. Treat, F. M. Whitehouse, all of Chicago; J. F. Alexander, Lafayette, Ind.; Clarence O. Arey, Cleveland, O.; Louise Bethune, Buffalo, N. Y.; G. W. Bullard, Springfield, Ill.; L. S. Buffington, C. E. Baldwin, Minneapolis; M. H. Baldwin, Memphis; John Beattie, St. Louis; C. A. Curtin, Louisville; A. C. Class, Milwaukee; F. G. Corser, Minneapolis; Charles Crapsey, Cincinnati; N. J. Clayton, Galveston, Tex.; William Davelaar, Milwaukee; G. W. Drach, Cincinnati; E. O. Fallis, Toledo, O.; E. F. Fassett, Kansas City; P. P. Furber, St. Louis; W. R. Forbush, Cincinnati; W. G. Gaines, St. Louis; E. S. Hammatt, Davenport, Ia.; F. D. Hyde, Dubuque; I. Hodgson, Minneapolis; H. Hohehschild, Rolla, Mo.; S. J. Hall, Columbus, Ohio; W. F. Hackney, Des Moines; C. C. Hellmers, jr., St. Louis; C. E. Illesley, St. Louis; L. Kledus, St. Louis; E. H. Ketcham, Indianapolis; J. J. Kane, Ft. Worth, Tex.; G. W. Kramer, Akron; J. J. Kuhn, Lincoln, Neb.; G. M. D. Knox, Kansas City; C. H. Lee, Des Moines, Ia.; H. A. Linthwaite, Columbus, O.; R. C. McLean, Chicago; G. H. Miller, Bloomington, Ill.; D. W. Millard, St. Paul; Louis Muller, jr., Chicago; S. J. Osgood, Grand Rapids, Mich.; G. W. Payne, Carthage, Mo.; W. L. Plack, Des Moines, Ia.; N. C. Ricker, Champaign, Ill.; G. W. Rapp, Cincinnati; E. G. Rueckert, Cincinnati; Alfred F. Rosenheim, St. Louis; Sidney Smith, Omaha; T. Sully, New Orleans; E. H. Taylor, Cedar Rapids, Ia.; C. J. Williams, Dayton, O.; F. A. Weary, Akron, O.; O. C. Wehle, Louisville, Ky.; J. W. Yost, Columbus.

The President: The reading of the minutes of the last convention is now in order, but as these minutes are very long, and as they have already been published in THE INLAND ARCHITECT and are probably familiar to all of you, I shall direct the secretary to dispense with the reading of them if there is no objection from any of the members.

No objection being raised, the reading of the minutes was passed.

The President: The report of the committee is next in order. The secretary informs me that copies of the constitution and by-laws of the association, and also lists of the committees are in the room and can be procured by members present.

The report of the Executive Committee is the first in order. Mr. Jenney, has the committee any report?

W. L. B. Jenney: The report is in the hands of our secretary, Mr. Root.

The secretary, after reading a partial list of the names of those reported for membership to the society, was interrupted by the president, who said: Shall the convention take action upon the names of candidates presented by the Executive Committee now, or shall it proceed with its business and take up these names hereafter? What is your pleasure, gentlemen?

Charles Crapsey: Mr. President, I move that the matter be deferred until the day after tomorrow.

C. C. Helmers, jr.: There are quite a number of gentlemen present at this convention, and many of them may be desirous of participating in our deliberations, and for that reason I should object to putting off passing on their names, as that would exclude them from taking part in our deliberations.

The President: The motion before the house is to postpone action upon the names of the candidates presented by the Executive Committee until the day after tomorrow.

Sidney Smith: I would move as an amendment, that the names of the gentlemen be submitted to the convention now, and that it would not debar others from being presented afterwards.

Motion seconded and carried.

The President: We will take up these names seriatim. The secretary will read the names of the candidates, and, after the reading of the name, if there is no question raised, it will be assumed that there is no objection to the admission of the gentlemen. If there be any objections or possibilities of any objection, the objectors will please make a motion for a postponement of consideration in that particular case, and such motion will be understood.

The secretary then read the following list of names: S. B. Abbott, Springfield, Mo., recommended by H. Hohehschild, Rolla, Mo.; F. Herr, Dubuque, recommended by Mr. Adler; L. D. Grosvenor, Jackson, Mich., recommended by Mr. Adler; S. E. Des Jardines, Cincinnati, recommended by G. W. Rapp; A. W. Hayward, Cincinnati, (now Wichita, Kan.), recommended by Mr. Rapp; C. B. Cook, Chillicothe, Mo., recommended by Mr. Rapp; John F. Cook, Chillicothe, Mo., recommended by Mr. Rapp; William M. Aiken, Cincinnati, recommended by Mr. Rapp; M. Maurey, Louisville, recommended by J. W. Root; Mr. E. P. Bosford, St. Paul, recommended by Mr. Corser; W. J. Dodd, Louisville, recommended by C. A. Curtin; C. C. Burke, Memphis, recommended by C. A. Curtin.

The President: There being no objection to the admission of these gentlemen, they are hereby declared members of the Western Association. The report of the Committee on Raising the Standard of Professional Requirements for Membership, will now be heard. Mr. Boyington is chairman of that committee.

Mr. Boyington: Your committee have no meeting, and I am therefore unable to make any report.

The President: The matter of uniform contracts and specifications was referred to the Executive Boards of the several state associations. Are any of these ready to report upon this matter?

No report was offered.

The President: The next in the list of committees is that of the Committee to take Charge of the Bill Governing the Office of Supervising Architect of the United States, and, as chairman of that committee, I beg to make the following report (Mr. Sidney Smith was called to the chair):

Your committee appointed to take charge of the bill governing the office of supervising architect of the United States, after careful consideration of the bill as left in our hands at the last convention, making such amendments and additions as were necessary to secure harmony of action with the corresponding committee appointed by the American Institute of Architects, had the same printed, and copies of it distributed. The bill, as prepared by the joint committee, was presented to congress by the Hon.

A. S. Hewitt. It had been before the house a number of weeks, and Mr. Burnham and myself, representing this association, and Mr. Bloor, representing the American Institute, paid a visit to Washington and endeavored to see what were the prospects for the passage of the bill, and to do what was in our power to expedite that passage. We had a hearing before the members of the Committee on Public Buildings and Grounds, and Mr. Burnham, personally, also had a number of interviews with gentlemen in the treasury department who would have more or less influence upon the fate of the bill.

The attitude of the members of the Committee on Public Buildings and Grounds seemed to be one of indifference. Mr. Stockslager, who was chairman of that committee in the forty-eighth congress, is not now a member of this congress, and there seemed to be no one in the committee who took any great interest in the passage of our bill. There seemed to be a fear that the free and general competition, which was made one of the features of the proceedings, would work detrimentally, perhaps, to the interests of local architects in the vicinities where public buildings might be erected.

Subsequently, Mr. Bloor received a letter upon the probable fate of the bill from Mr. Hewitt, in which Mr. Hewitt stated that there was no hope of the passage of the bill unless there was a strong pressure brought to bear upon members of congress by the press, and by the constituents of those members of congress.

Your committee has done nothing further toward securing the passage of the bill except in the way of seeking to interest prominent citizens in its fate, and can only recommend to this association that a similar committee be appointed by this convention to act in its behalf during the next year, to again cooperate with the corresponding committee of the American Institute of Architects and to do all in its power to interest prominent citizens and members in the work of the association. The committee also recommends that the same work and the same endeavor to influence citizens and press that is made the duty of the committee, be taken up by each individual member of the association, so that we may have in every state represented by this association efforts made to secure an expression of public sentiment in favor of the bill as we have proposed it. The committee realize that the passage of this bill is a matter of extreme difficulty, and they doubt whether it is possible to secure its passage by the forty-ninth congress, and that it can never be passed if we are not unremitting in our efforts to work upon public sentiment.

I. Hodgson: I move that that committee be retained.

The President: We do not ask for a continuation of the personnel of the committee, but that a similar committee be appointed by this convention. What is your pleasure?

Motion carried.

The President: The next in order is the report of the Committee on Procuring Architectural Drawings and Photographs for Exhibition at the Next Convention of the Western Association. Mr. Alexander is chairman of this committee.

Report passed.

The President: We will now hear from the Committee on the Collection of Statistics on Competitions.

Sidney Smith: Mr. Illsley is not present. There has been some communication between the members and Mr. Illsley, but Mr. Illsley, as chairman of the committee, would necessarily have the report.

The President: We will postpone hearing from that committee until Mr. Illsley arrives. The Committee to represent the Western Association at the next Annual Convention of the American Institute has not been able to serve, inasmuch as that convention has not yet taken place. If there is no objection, this committee of the last convention can be kept in force to do the work laid out for it at that time.

Mr. Jenney: I move that the power remain with the president to employ substitutes in the places of those who may tender their resignations. Carried.

The President: The next in order is the Committee on Statutory Revision, and as chairman of the Committee on Statutory Revision, I will say:

That it has been impracticable to have a meeting of that committee before this convention, but as there was practically no work to be done by the committee, as such, in most of the states, and as in the states there have been sessions of the legislature since our last meeting of so exciting a nature that the bill, as especially placed in charge of that committee, for the regulation of the practice of architecture in the different states, has not made any progress. The bill has been printed. It should be pushed to a passage in the sessions of the legislature that are to take place this winter. There are seven or eight states represented by this association, which will have sessions of the legislature. I would recommend, and I think I do this with the concurrence of the members of the committee who are present, that so far as the pushing of our bill in the individual state legislatures is concerned, that this be made the task more particularly of special committees appointed by the associations in the states which will have sessions of the legislature, and that where such meetings, where there is no such state organization, that there the architects represented in our association select one or more of their number to make this effort. Your committee makes this recommendation for this reason, that it is impossible for the president of this association, or for its members assembled here in convention, to make selections of the members of the profession best qualified to do this work before the various state legislatures. It requires local knowledge and a knowledge of the men to be influenced, and of the capacity of the individual architects to accomplish this work, to make proper selections.

Your committee also recommends that while the last convention has endeavored to so form the proposed enactment as to comply as nearly as possible with constitutional provisions, so far as the committee itself could see them, still many of those vary in the different states, and that, therefore, these sub-committees in the different states, the appointment of which we recommend, be empowered to make such changes and such deviations from the bill as we have prepared it, as will make it best adapted to the peculiar legal provisions existing in the different states.

Your committee believes that harmony of legislation can be secured to better advantage if slight modifications are made to satisfy the peculiar requirements of each state.

With reference to the bill regulating the office of the supervising architect, which is also to a certain extent in the hands of this committee, nothing has been done, as all has been left in the hands of a sub-committee.

Your committee has no further immediate recommendations to make.

E. H. Ketcham: I move that the report of the Committee on Statutory Revision be accepted.

S. M. Randolph: I move as an amendment to that motion that the committee be continued.

Mr. Ketcham accepted the amendment of Mr. Randolph.

The President: I would ask Mr. Randolph to withdraw that motion, inasmuch as it is to a certain extent at variance with the recommendations of the committee itself. The committee recommends, to all intents and purposes, a reconstruction of itself, that is, so that its members may include those best capable of pushing its work. I would suggest that the motion proposed be formulated in this way: that the committee be continued, and that it be constituted of members selected by the individual state organizations; or, where there are no state organizations, by members of the association who may reside in each particular state. That would be in harmony with the recommendations of the committee.

Mr. Randolph said: My reason for wishing to continue the committee was this, that they have drawn the bill, and when the state associations are presenting it before the different legislatures they will have the authors or fathers of the original bill to explain to them, perhaps, the necessity for amendments they may have to offer to them, which will require thought.

Our central committee has given the matter a great deal of study, and for that reason I thought that at least a part of that committee should be continued so that the auxiliary committees could at any time consult with them. I accept the amendment as suggested by Mr. Adler.

Motion carried.

The President: The next in order is the report of the Committee on the Formation of State Associations. Mr. Alexander is chairman of that committee.

The Secretary: There is one matter I would like to call attention to, and that is a slight change in the by-laws which has been overlooked apparently. In article 6 it is printed, "it shall be the duty of the president to preside at all meetings of the association, and in his absence the vice-president of the association for the state." It should be, instead of vice-president "president." That was the subject of a motion at the last convention, but it in some manner escaped being printed in the by-laws.

The President: The chairman of the Committee on the Formation of State Associations not being present to make a report, new business is next in order.

Sidney Smith: Will the chairman of that committee have the opportunity to report later?

The President: Yes, sir.

Mr. Smith was again called upon to occupy the chair, and the president said as follows:

The President: Gentlemen, as new business is now in order, I would like to suggest that action be taken with reference to some vital matters that have generally been left to the end of the convention and have then been hurried through. I refer first to the fixing of a place for the next annual convention of this association, and next, to the nomination of officers. I believe that with reference to both of these, the practice of the last convention was not the best; the entire matter was left to a committee, and it is not at all certain that the action of a single committee acting on behalf of the association, and thereby practically forcing the association to endorse its action, really expresses the will of the majority of the association. Now, with a view also to avoiding objections and difficulties incident to indiscriminately nominating a place for the next convention, and for officers in open convention, which also has its drawbacks, there should be appointed by this convention two committees, each composed of seven members, whose duty it shall be each to place in nomination, first the place for holding the next convention, and secondly, a list of the names of the members whom they propose as candidates for the various offices to be disposed of by this body. I will not make this a motion but as a suggestion, and hope that one of the members will put it in the form of a motion; that these committees be elected either by this body as a whole, or appointed by the Executive Committee or by the president—that this selection or appointment take place today, and that the committees be instructed to report at their convenience before the close of this convention. We will gain by this a great advance over the work of previous conventions if we place upon these nominating committees the best men in the association; that is, having but a single committee, modesty will compel these people from nominating themselves. By appointing two such committees we will have strong men in each, men who know best what nominations to make, and we will have a chance of having some of these very members of these committees who are desirable as officers of the convention nominated, if not by their own, then by the other committee.

Mr. Hodgson: I move that the chairman of the present association appoint two such committees.

Mr. Crapsey: I understand that there are seven state organizations. Is that one for each member?

The President: Not necessarily. My object in selecting seven members for each committee was that by selecting fourteen men we would be apt to get a very fair representation of the best material of the convention and which would be independent of state organizations.

Mr. Crapsey: How many state organizations are there?

R. C. McLean: There are nine.

Mr. Crapsey: Then I think the committee is too large, unless you appoint one from each state organization. Anyway, I move that each question be voted on separately.

Geo. W. Rapp: Does this mean two committees with similar objects?

The President: Yes, sir. And for the information of Mr. Rapp, I will say this, and it will doubtless interest members in general, that my object in joining the name of the place of the next convention with the nomination of officers, each in the same committee, was this: that the board of officers should be chosen to a certain extent with reference to the place where the next convention is to be held. If the convention is to be held, I will say in Minneapolis or St. Paul, it is quite likely that it would be desirable to have a somewhat different disposition of the members of the Executive Committee, etc., than if the convention were to be held, I will say in Cincinnati, or Buffalo or Chicago; and I thought it would be well if each committee were to make these nominations of officers and its nominations of the place for holding the next convention jointly, so that the two would be in harmony. It has also another purpose, in that it will give greater freedom of choice to the members of the convention, as it does not necessarily follow that they must indorse *in toto* the report of each committee; the association may make its selections from these nominations afterward; it may select a place to hold the convention of one committee, and a portion of the officers nominated by that committee, and a portion of the officers nominated by the other committee.

The amendment of Mr. Crapsey was withdrawn, and the motion of Mr. Hodgson, that the chair appoint the committees, was carried.

The President: I will make an effort to select the members of those committees, and announce them either at the latter part of the afternoon session or early tomorrow morning (Thursday.)

The President: The secretary has been in receipt of communications from parties who manufacture special articles of interest, or that they consider of interest to the members of our profession, such as patent processes, etc. He has received notices calling the attention of this convention to

their articles. Is it your pleasure that such letters be read and acted upon, or that they be laid aside by the secretary?

Mr. Rapp: I move that these letters be posted in the adjoining room for the inspection of the members.

No objection being raised, this was ordered done.

F. G. Corser: To go back in this matter of nominations, I would suggest that each member of these nominating committees be required to get up a ticket in print for distribution among the members, so that we may compare, split the tickets, if need be, etc., as we wish.

The President: This can be done if the committees can come to an agreement early enough.

A motion by Mr. Randolph to adjourn until 2 P.M., and amended by Mr. Treat to 3 o'clock, was carried, the time to be 2:30.

FIRST DAY—AFTERNOON SESSION.

WEDNESDAY, November 17, 1886.

President Adler called the convention to order at 3:15 and said:

I will now announce the names of the members of the two committees to make nominations of officers for the ensuing year, and to put in nominations places for the holding of the next convention. The first committee is: J. F. Alexander, Lafayette, Ind.; L. S. Buffington, Minneapolis, Minn.; Wm. Holabird, Chicago, Ills.; Mr. L. D. Cleaveland, Chicago, Ills.; Mr. C. C. Helmers, Jr., St. Louis, Mo.; G. W. Rapp, Cincinnati, O.; and Mrs. Louise Bethune, of Buffalo, N. Y. The second committee is: D. W. Millard, St. Paul, Minn.; S. M. Randolph, Chicago, Ills.; E. H. Taylor, Des Moines, Ia.; Sidney Smith, Omaha, Neb.; Sam'l A. Treat, Chicago, Ills.; C. A. Curtin, Louisville, Ky.; and P. P. Furber, St. Louis, Mo.

The president announced that the treasurer would now read his report, and if the members would kindly give their attention they would doubtless find it a very satisfactory document.

Treasurer S. A. Treat: The treasurer's report is as follows:

Received from Mr. Adler, the former treasurer.....	\$ 27 68
Dues to date.....	828 00
Interest on United States bonds and profits on the sale of the same.....	26 25
Total receipts.....	\$881 93
Disbursements.....	\$190 91
Balance on hand up to this morning.....	\$691 02

Since that time I have collected over \$100, and as soon as possible will make my report.

The President: I have here a motion,

Resolved, That the president appoint a committee of three members from each state association to collect information in regard to legal decisions relating to building interests, and that they report at the next annual convention.

The motion is made by Mr. Helmers.

The motion was seconded.

Mr. Helmers: I would say in regard to this, that there are cases in our practice almost daily where an architect is obliged to select a course to pursue in a matter that is afterwards apt to be drawn into court, and a simple annual of such information to refer to would assist us very materially in coming to these decisions; and I think that if a committee could be appointed from each state to gather information regarding decisions in that state, and it could then be put in the form of a pamphlet, that it would be invaluable to every member of the profession.

The President: I will say in explanation, that having been for two years a member of the committee that has among its duties the collection of this information, that during those two years there was but one member of the committee who favored any effort at all to collect this information, and of course the reach of his investigations was comparatively small as compared with the efforts of a committee from each state. This committee, if appointed, would take, within the extent of the work outlined here, the place of the present committee on statutory revision.

Mr. Ketcham: In that way it seems to me we will not be able to reach the end sought for. Were the matter placed in the hands of attorneys by the respective state associations, and they have these attorneys collect this information, which they could do much better than the architects, we would get a far more reaching search than in any other way. It would seem preferable to delegate the search to each state association.

Mr. Helmers: While it might be a very good thing to employ attorneys, yet I cannot agree with Mr. Ketcham in referring it to the state associations. I think, my experience has always been, that the matter so referred, has died; in other words, the state associations have accepted the draft and done nothing with it. I think that if the proper men are selected to cull out this information, we can get at it far better; and I think the only way to do that is to have committees appointed to report at the next annual convention, and if any of the state associations seem sufficiently interested, they can employ a lawyer and defray the expenses of so doing.

The President: Anything further to be said on Mr. Helmers' motion? No response being received, the president again read the motion, which was put and carried.

The President: I would request that to enable me to act intelligently with reference to the appointment of members of this committee, that the representatives of each state agree among themselves as to who would be the best men to select for this duty, and give me the names this afternoon or tomorrow morning, so that I may be able to appoint this committee with some reasonable expectation that the gentlemen appointed will do the work. If I should select them haphazard, as I should have to do, on account of my limited acquaintance with the association, I am afraid I might make many blunders, and would not make the proper selections. I would also suggest, in the matter of the committees on nominations that have been appointed, that the individual members of this convention assist these committees by writing on slips of paper as he suggests, as regards nominations or as regards the place for the next convention that they may entertain, and that this memoranda be handed to the respective committees. It would be well that all of you that have such suggestions to write them out in duplicate and hand one to the member

of each of the committees. In this way the committee will get to know the wishes of the association much better than they could otherwise do, and they would be put in possession of the information they desired much sooner than they could be by personal conversation or inquiry. Is there any other new business to be brought before the convention? The Board of Directors has reported some new names of applicants for membership, upon which their report is favorable. Are you ready to receive them? if so, I will request the secretary to read the names.

The secretary then read the following list of names:

J. F. Wing, Fort Wayne, Ind., recommended by Mr. Alexander; M. S. Mahurin, Fort Wayne, recommended by Mr. Alexander; Eugene S. Calkin, Los Angeles, Cal., recommended by Mr. Gay; G. W. Thompson, Nashville, recommended by Mr. Rapp; James King, Huntington, W. Va., on his own application.

Mr. Sidney Smith: I move that the name of Mr. Smith be referred for further consideration.

The President: If there is no objection, it will be so referred.

The name of Mr. King was ordered referred for further consideration.

The Secretary: The next name is M. F. Isbell, of Goshen, Ind., recommended by Mr. Holabird; J. F. Frees, Columbus, Ohio, recommended by J. W. Yost; Bernard Vonnegut, Indianapolis, Ind., recommended by Mr. P. P. Furber and J. F. Alexander.

Mr. Ketcham: I would like to add to that list the name of Mr. Merritt Reid, of Evansville, Ind.

The President: If there is no objection to the admission of the report of the Board of Directors, that these gentlemen be admitted to membership, they will be declared members of this association. They were so declared.

The President: Mr. Sullivan will now read before you a paper which he has prepared for us.*

Mr. Sullivan's paper was prefaced by the following remarks:

Mr. President and gentlemen of the convention: I would like to say, in a prefatory way, before reading my essay, that I have prepared, on "Inspiration," that to write an essay on inspiration is something like writing an essay on the eyesight: it is something that we all know about but it is very difficult to define. Therefore I will indulge in no definitions, but instead of dealing in plain language, I will treat my subject in the language of metaphor. My essay is divided into three parts, being a direct appeal to nature, whence all our emotions and inspirations come.

The President: The Committee on State Organizations has presented its report.

REPORT OF COMMITTEE ON STATE ORGANIZATION.

To the Western Association of Architects assembled in Convention at Chicago, November 17, 1886.

Your Committee on State Organization has the honor to report that in the prosecution of its labors, it has met with a hearty and cordial cooperation.

We have successfully organized the States of Minnesota, Iowa, Illinois, Nebraska, Kansas, Missouri, Ohio, Texas, and Indiana, all of which are working in a harmonious and satisfactory manner.

Mr. Harteau, your committee from Wisconsin, asks that one member from Milwaukee be added to his committee.

Mr. Osgood, your committee from Michigan, asks that one member from Detroit be added to his committee.

Mrs. Bethune, committee from New York, has organized the Buffalo Society of Architects, fourteen members, and they are working in a harmonious manner. She has also turned her attention to the various other cities in the state, with prospects of success.

We think it best that this committee be continued until an association in every state is organized.

Respectfully submitted,

J. F. ALEXANDER, Indiana,
CHAS. K. RAMSEY, Missouri,
E. H. TAYLOR, Iowa,
I. HODGSON, Minnesota,
H. P. McDONALD, Kentucky,
Geo. W. RAPP, Ohio,
D. M. HARTEAU, Wisconsin,
SIDNEY SMITH, Nebraska,
W. H. CUSACK, Tennessee,
T. SULLY, Louisiana,
S. J. OSGOOD, Michigan,
J. G. HASKELL, Kansas,
S. A. J. PRESTON, Texas,
MRS. LOUISE BETHUNE, New York.

To Dankmar Adler, Esq., president of, and the members of the Western Association of Architects.

GENTLEMEN,—Having been appointed as a committee on State Organization of Architects for the State of Wisconsin, at the second annual meeting, held at the city of St. Louis, Mo., I beg leave to report as follows: I went to the city of Milwaukee, Wis., in the month of March, 1886, and interviewed the architects resident there. I was informed that a local organization of architects had been formed there some weeks previous to my visit. I used my best endeavors to have them assist in forming a state organization and merge their local organization therewith, but without success. I therefore dropped the matter, and have done no more to that end. I would respectfully recommend that some member from the city of Milwaukee would be appointed in my stead for the following reasons: That the bulk of architects reside in the city of Milwaukee, and that I am comparatively alone in the city of Green Bay, there being but one other architect resident here. As I will be unable to attend your meeting, I would suggest the name of, and recommend, that Thomas N. Philpot, of the city of Milwaukee, be appointed in my stead, as I herewith respectfully resign my chairmanship on the Committee on State Organization for the State of Wisconsin. All of which is respectfully submitted.

Dated November 17, 1886.

D. M. HARTEAU,
Chairman of Committee on State Organization, Wisconsin.

Mr. Yost: I move that the report be accepted and the committee continued, and that the president appoint members from the different states, as requested by the members of the committee.

The President: You have heard the motion, that the report of the committee be accepted, the committee continued, and that the additional members asked for be appointed.

The motion was carried.

Mr. Vonnegut: The Indianapolis Society of Architects have presented a protest against the Indiana State Association. I would move that that protest be now read.

The President: Has this protest been received as yet by this association?

* Published elsewhere in this issue.

The Secretary: As the protest was received by the Executive Committee too late (it reached here this morning) the members of the Executive Committee were approached by several persons, both belonging to the Indiana State Association and the party of the protestants, asking that this report be for the time held in abeyance, because the difficulty, whatever it was, was of such a nature that it was eminently probable it would be adjusted between the members of the Indiana Association themselves. For that reason the Executive Committee has held the report in abeyance and have taken no action whatever upon it. They have, however, referred it back to Mr. Alexander and one member of the Executive Committee, for future action.

Mr. Patton: I would like to inquire from the committee whether anything has been accomplished in the State of Wisconsin toward the formation of an association?

The President: I infer from the report that nothing has been done, and that it is in that account that the appointment of an additional member of the committee is asked. It appears that by an unfortunate selection of a member to represent this association in that committee it was impossible to secure organization—not because Mr. Harteau, who represents this association in the committee, is not well qualified, but because he is located in an out-of-the-way part of the state, and, therefore, asks that an architect from Milwaukee be added to the committee to make it effective. The chair regrets very much to be compelled to announce that Mr. D. H. Burnham, who had prepared what promised to be a most interesting paper, to be read this afternoon before this convention, has been suddenly and unexpectedly called out of the city—to Springfield, I think—and will be unable to present this paper.

Mr. Patton: In connection with the State of Wisconsin, I understand that there has been formed last year a local organization in Milwaukee. Would it not be the better course to let that association take charge of the matter of forming a state organization, or merge itself into one, as there is already a body of architects in Milwaukee who are organized as an association?

The President: The chair will adopt your suggestion to the extent that he will ascertain who is the leading member of that Milwaukee association, and will appoint him the associate of Mr. Harteau on the Committee of State Organization.

Mr. Rapp: I would like to ask if Mr. Cusack, of Nashville, who is on that committee, is still in Nashville. I was told this afternoon that he had removed to New York state. It is, therefore, a question whether it would not be better to appoint another. Mr. Thompson, of Nashville, is here and can answer.

The President: Is Mr. Thompson here?

No response being received, the chair continued: The chair can take cognizance of this, and also the Board of Directors, and if it seems advisable to make a change of membership on the committee it can be done hereafter. I would be obliged to you, if Mr. Thompson should attend a future session of this convention that you will call my attention to his presence. Gentlemen, Mr. Root has an important resolution to present to you.

Secretary Root read the following resolution:

WHEREAS, In the case of each building constructed from the designs, and under the supervision of a member of this association, the owner of the building should be supplied with full data of all official points involved in its construction.

Resolved, That the Executive Committee have printed and mailed to each member of the association a form, the object of which shall be to supply to members, under the seal of the association, a schedule of points in relation to which the Executive Committee deem it advisable that clients should be informed.

My object in this resolution is this: I suppose every architect has in his practice frequent cases in which a building constructed for one purpose is changed from that and devoted to another purpose. The measure of his responsibility in such case is very difficult of estimate. Serious damages may occur not through any fault of his, but by the heedless overloading, for instance, of a building constructed for light manufacturing purposes which is turned into a warehouse; and the object of this form suggested is that it shall state all the necessary points of structure in the building, its uses, its intended purposes, the weights intended to be borne by the floors, the amount of the load supposed to be delivered on the clay at the bottom of the foundation, the character of the columns involved in the structure, and all those essential points which go to determine the general drift and character of the building; and that in furnishing the owner with this, the architect shall disclaim any personal responsibility if the building is diverted from its original purpose without his consent. In other words, there shall be a blank supplied by each one of us that shall define the purposes of the building, and free us from responsibility in case the building is changed from the original purpose.

The motion, seconded by Mr. Smith, was carried.

Attention was called to copies of the competition code for distribution, and the meeting adjourned.

SECOND DAY—MORNING SESSION.

THURSDAY, November 18, 1886.

The second day of the convention was opened by the president, who called the meeting to order at 11 A.M.

The reading of minutes and calling of the roll was dispensed with.

After discussing the existence of members who at the present time are not eligible to membership, it was moved by Mr. Shipman:

Resolved, That in cases where gentlemen have been recommended for membership to the Board of Directors under a misapprehension of the rules governing the eligibility of membership, that the Board of Directors be given power to rectify the errors made and to notify the gentlemen in question of their ineligibility under the rules of the association.

Mr. Curtin: Do I understand that that applies to any member who has been elected by this Association during the past two years as well as yesterday? Would it not?

The President: It could be made so. This motion, probably, was not intended to be corrected to that extent, but the association, of course, has a right to make it so.

Mr. Curtin: Then I move, as an amendment, that all membership from the beginning be taken under consideration of the Board of Directors with reference to their eligibility.

The President: Will Mr. Curtin please put that in writing? While this motion is being written out it might be well for the secretary to read the names of the gentlemen recommended for membership by the Board of Directors.

The Secretary: The first on this list is Mr. Fred. Kees, of Minneapolis, recommended by L. S. Buffington; F. J. Grodevant, Leavenworth, Kansas, recommended by Mr. Buffington; Merritt J. Reed, Evansville, Indiana, recommended by E. H. Ketcham; J. Mulvey, Aurora, Ills., recommended by Mr. D. Adler; Wm. Zimmerman, Chicago, recommended by Mr. Lautrup.

The President: If there is no objection to the admission of these gentlemen they will be declared members of the Western Association of Architects.

No objection was raised and the gentlemen were so declared.

Mr. Shipman's motion, as amended by Mr. Curtin, was then voted upon and carried.

The President: Are any of the committees who were called upon yesterday to report, now ready?

Mr. Boyington: I have had a conference with one member of the committee, on the subject of elevating the standard of our profession by the introduction of members to our society. We have concluded that section 4 of our constitution covers all the ground that we could recommend, and we have no suggestions to offer.

[The section referred to reads as follows:

SEC. 4. Any architect practicing his profession in the United States may become a fellow of this association. All members in good standing in any state association organized under the laws of that state, also all members of the American Institute of Architects who shall become subject to the Constitution of the Western Association, are by virtue of such membership fellows of this association.—E.]

The President: You have heard the report of your committee; what is your pleasure, gentlemen?

Mr. Yost moved that the report of the committee be received, which was done.

Mr. Sidney Smith: I have a resolution to offer for the consideration of the convention, and I think it touches considerably upon what has just taken place. I will first read the resolution:

Resolved, That all applicants for membership, recommended by the Board of Directors to be hereafter voted upon by ballot, that five ballots cast against any such applicant will be sufficient for his rejection.

Mr. President, I offer this resolution for two reasons: It has come to the knowledge of the Board of Directors that application for membership have been passed here, and although there were a number of gentlemen present in the room who would otherwise have objected to them, they did not feel justified in doing so in open convention. This I think would be remedied by a vote by ballot, the same as is customary with many other associations. It does away with the disagreeable necessity of a man's making enemies; while he may personally be good friends with the applicant, he would not care to go up in open convention among so many of his fellows and oppose him for membership in this association; and it is for this reason that I offer the resolution.

The President: Is the resolution seconded?

Mr. Boyington: I second it.

The President: You have heard the motion of Mr. Smith; have you any remarks to make in reference to it?

Mr. Curtin: Would not that be considered as an amendment to the by-laws?

Mr. Sidney Smith: I think that can simply be an addition to the clause as it already exists.

Mr. Yost: I think this association ought to hesitate before accepting a resolution of that kind; I think it ought to be thought over pretty well before we do it. I have heard it talked for some time and I have myself thought of it; but there ought to be some recourse, there ought to be some way, if a man happens to have enemies among the members of the association, or those who might prefer that he should not be a member, it seems to me there should be some way whereby he could get into this association. It seems to me the objections could be made privately to the board when names are presented for membership, if they were read before the association and time was given for members to make objections to the Board of Directors—in a private way if they chose—who would not carry it any further, but would let the member state his objection, and consider it, it seems to me it would be a better and a fairer way than to adopt the resolution whereby the association should vote by ballot on the reception of these gentlemen. The member who objected would not have to state at all what his objection was. Now, I know, I think, a good many gentlemen who are members of the profession in different localities, who by their course of procedure—professional and otherwise—have personal enemies. I have known of their being objected to in various ways, and yet perhaps they are fairly entitled to become members of an association like this one. It seems to me the better way would be to have the resolution made so that members objecting or any member objecting or wishing to offer any objections, be allowed time; in other words, that the election of members be not rushed through in this manner, but that their names be read before the association and a certain amount of time be allowed for objections to be made, in any way they please, to the Board of Directors, and let them judge of the sufficiency of the objection; and also refer the objection, if they think proper, to the person recommending the individual to become a member. I would like to make an amendment to the resolution to that effect.

Mr. Corser: I think it would be very difficult for a man in good standing, professionally and otherwise, to find five adverse votes. I have heard that one name went through here yesterday without any objection whatever being filed with this committee, and it is now discovered that sixteen ballots of men here present would have been cast against that candidate if he had been put through by ballot.

Mr. Osgood: Would it not be as well, when a gentleman applies for membership, to leave it in the hands of the board, and let the board form themselves into an examining committee and give the member a rigid examination?

The President: The difficulty in such cases is this: The board meets on the day of the convention—perhaps, under favorable circumstances, the day preceding the convention—most of the candidates are presented at that time; the board at that time has a large amount of work on its hands, and is, of course, also desirous of participating in the proceedings of the convention, and it could hardly take the time necessary for that rigid examination.

Mr. Furber: In view of the questions that have been brought up, would it not be well that some resolution be adopted providing that all names of candidates should be presented at least thirty days before the convention sits, and a list of these names be sent to each member of the convention, and that they have time to look them over and find out, if possible, if they are men we want in the association?

The President: I doubt if that would be practicable; nevertheless, if it is offered as an amendment to the pending motion, it will be considered. Please put it in writing.

Mr. Yost's amendment, as read, was as follows:

Resolved, That objections to candidates be referred to the Board of Directors and time allowed to examine into the objections, the names of applicants to be read in open session at least one day before action of the Executive Committee.

The President: Are there any remarks upon this amendment?

Mr. Sidney Smith: Mr. President, in reference to that amendment, you nearly covered the ground a little while ago. When an application for membership was made, my experience of last year was that about ten minutes were given to its consideration, and possibly the applicant was unknown to any of the directors. The time that will be necessarily lost in finding out from the members present whether such a man would be acceptable, would cause an unlimited amount of work and unnecessary feeling. That is the reason I introduced the resolution, in order to avoid this. It has been justly said that a man with five black balls would have five enemies anyway; and the same would occur by personal explanation. Mr. Yost's amendment simply says that the opponent's name should not be mentioned, nor his charges, nor the objection he has to make. It seems to me that a vote by ballot would certainly cover it very much easier than by the other method.

Mr. Yost: I would like to say further that one of the points I wanted to make by the amendment was that the objections would have to be heard; that the person applying for membership into this association, if there were objections to him they would have to be heard by someone; while voting by ballot he would simply pass in and nobody would know what the objections were, whether by misapprehension or what, and I thought by referring it to the Board of Directors that they could hear what the objections were. One might be mistaken, might vote against the applicant because he thought he knew something about him, but after examination would not do so. There is another objection which I think would be a good one against voting by ballot, and that is that it would take up about one half of the time to vote upon members separately; if they come in as rapidly as I have known, it would take a considerable time to elect each member. We ought to stop this hasty election of members; their character and standing ought to be more thoroughly inquired into. I believe I would favor the amendment that Mr. Furber speaks of, requiring that applications be sent in to the Board of Directors, and that a considerable length of time be allowed for inquiry, a year if you please, so that they could be fairly inquired into, and members of the association become acquainted with the names of the applicants. I do not think we ought to be so hasty in the matter of electing members. While I am certainly in favor of electing anybody who is by any fair judgment entitled to membership in this association, at the same time I think we ought to have the applicants inquired into. This idea of having a name presented and vote taken by the executive committee within ten minutes, I do not think ought to be continued; it ought to be thirty, sixty or ninety days, and the members of the association ought to know who the applicants are before action by the executive committee. I do not like the idea of simply taking a ballot without his recommender having any chance to explain away or dispense with any objection that might be made. It seems to me it is trying a man behind his back, and may do him an injustice.

The President: Do you wish the amendment of Mr. Furber incorporated in this?

Mr. Yost: Yes, sir.

The President: The amendment as amended is to this effect:

Resolved, That names of candidates be presented to the Board of Directors thirty days before the session of the convention, and that a list of the names presented be sent by the board to each member for investigation.

The President: The amendment of Mr. Yost is that objections to a candidate be referred to the Board of Directors and time allowed to examine into the objections, the names of applicants to be read in open session at least one day before the action of the Board of Directors.

The amendment of Mr. Yost was lost.

The President: We will now proceed to the amendment of Mr. Furber, which is to the effect that names of candidates be presented to the Board of Directors thirty days before the session of the convention; that a list of these names be sent to each member for investigation; to be balloted on in open convention, five black balls to constitute a rejection.

C. A. Curtin: I was approached by our chairman on state organization about two weeks ago to form a state association in Kentucky. I called his attention to several parties who would hardly fit in this association, but they were allowed in that to become members of the Western Association. Who is to ballot on those?

The President: We would have to leave that to the good sense and judgment of the state association.

Mr. Fassett: Our authorized publication, THE INLAND ARCHITECT, about a month before this association meets also sends out by authority of the Board of Directors, invitations to all architects to join this association.

Now, if we lay that over thirty days, and they are invited to come here at a certain day; they send their applications here indorsed by some practicing architect who is a member of the association, and if this resolution is passed they do not get a hearing for the next year. I think Mr. Smith's resolution covers the whole thing as near as can be without too much wording.

The Secretary: There is nothing official whatever about any of these invitations that have been sent out. The committee considered it best not to send them out too far in advance of the convention, lest members or persons should forget before the convention. I do not consider that THE INLAND ARCHITECT has acted upon any responsibility except as being the medium of sending out these invitations.

Mr. Yost: I understand that Mr. Smith's original resolution is in regard to that clause in the constitution that has just been read. Will it then be required that the members of the different state associations will have to be admitted by ballot if they are members of the association or not?

The President: I should rule that unless there was an amendment to our constitution this resolution requiring a ballot upon the admission of members would apply only to those who are not members of state associations and not members of the American Institute of Architects. We cannot pass a resolution to effect those who by virtue of our own constitution are already eligible to membership. Does any one else wish to speak upon the amendment of Mr. Thurber? Those who are in favor of it will please signify it by rising.

The motion is lost, as it requires a two-thirds vote to amend the by-laws.

The President: The consideration of the motion of Mr. Smith now comes up. It is that all applicants for membership recommended by the Board of Directors be hereafter voted upon by ballot, and that five ballots cast against any such applicant shall be sufficient for his rejection.

Mr. Curtin: I move to amend that by stating that all members of state associations be admitted by ballot to this association.

The President: That can be brought up at any time hereafter. Those in favor of the motion of Mr. Sidney Smith will please rise.

The motion was carried.

The President: I have here a motion by Mr. Alexander, who moves that the secretary be authorized to issue certificates of membership to all members in good standing, under the seal of the association.

The motion was seconded.

Mr. Shipman: I would suggest to the mover of that resolution that he insert a provision authorizing the secretary to get up an appropriately engraved membership certificate.

The President: Mr. Alexander accepts the amendment.

The President: The motion of Mr. Alexander as amended by Mr. Shipman is that the secretary be authorized to issue certificates of membership to all members in good standing, under the seal of the association, and that he insert a provision authorizing the secretary to get up an appropriately engraved membership certificate.

A Member: I move that the certificates be limited to one year and that a new one be issued every year, so that the difficulty you suggested before can be avoided.

A Member: I am opposed to this certificate business. I have in mind a member, who is a member of this association. He is a practitioner but has since quit the business and gone into something else. I do not think we need any certificate at all; we have all got along so far very well without them.

Mr. Shipman moved that further consideration of the subject be postponed until the next annual convention.

The motion was seconded.

The President: Those who are in favor of laying the motion of Mr. Alexander, as amended, on the table for one year will please signify it by saying "aye."

Carried.

The President: Is there any other business to be brought before the convention? If not, we will proceed with the reading of the papers which have been kindly prepared for us. The secretary read some telegrams received from George C. Mason, secretary of the American Institute, and also Mr. Bloor, of the board of directors, conveying the institute's congratulations.

A Member: I move that the secretary be authorized to appropriately respond to these dispatches.

The President: If there is no objection it will be considered the sense of the association that the secretary is authorized to appropriately respond to the last dispatch read. You will now have the pleasure of listening to a paper prepared for this convention by Dr. De Wolf, the commissioner of health of this city, whose services in the cause of reform in sanitary construction of buildings and to sanitary science at large have been so great that they cannot be overestimated by any of us. Gentlemen, I have the honor to present to you Dr. De Wolf.* (Applause.)

The President: I believe I echo the unanimous voice of the association by extending its thanks to Dr. De Wolf for the very able essay he has read to us, and in begging of him his permission that it be published in the report of our proceedings, of which it will form a most valuable—perhaps the most valuable—part.

The President: Gentlemen, Mr. Artingstall, who has been for so many years a designer of the public works undertaken by the city of Chicago, and whose productions have been models in their way to other cities, has consented to favor us with an essay. The president then introduced Mr. Artingstall, who read a paper, prefaced by the remark that the short paper he had prepared was but one of the minor details of the question of architecture, but it might be of some interest to the convention.†

The President: As it is still some time before the hour of adjournment, I think you will all be very much gratified to hear read the paper which has been prepared for this occasion by Mr. Boyington, the Nestor of our

*The paper is published elsewhere in this issue.

†The paper is published elsewhere in this issue.

profession in Chicago. He is the first I believe who established in his practice in this city the rule that the architect should be the architect only, and should be in the employ of the client only—a rule which has done more toward elevating the character of the profession at large in this city than anything else done by any practitioner among us.

Mr. W. W. Boyington: Mr. President and gentlemen of the convention, allow me to say before commencing with what I am about to read you and to illustrate by some diagrams that I have made, that it largely refers—almost entirely—to my own productions, my own experience, and, consequently, I trust you will not think me arrogant in referring thus to my own work; but I have been of the opinion that to an association like this something practical, something that has been done, perhaps, a little out of the ordinary course, is fully as interesting as to go upon theories that have the name only, with only partial practice; so that in alluding to this work that I have accomplished or performed, it is not for the purpose of bringing before this association anything extraordinary that I have done. My address will be largely upon the subject of foundations, and my illustrations will demonstrate why they are so.*

The President: There is here a report of the committee upon the advisability of changing the subdivision of the standard foot from duodecimal to the decimal subdivision. Is it the pleasure of the convention that this reading be deferred until another session, or read now?

In the absence of the secretary, the president then read the report, which was as follows:

REPORT OF COMMITTEE ON METRICAL MEASURE.

To the Western Association of Architects in Convention assembled, at Chicago, November 17, 1886.

MR. PRESIDENT AND GENTLEMEN,—Your committee appointed at the annual meeting of 1885, to consider and report upon the advisability of changing the subdivision of the standard foot measure from duodecimal to decimal subdivisions, have the honor to report as follows:

The history of notations is not without interest. The simplest and best of known systems of notation, the Arabic, originated in the Indies, was improved by the Arabs; was introduced in Europe from the tenth to the fourteenth centuries, but not popularized until a later date. The advantages of this system were, and are so apparent, that we can only wonder that irregular denominate numbers of measure have maintained so largely their place in the world. It appears every way reasonable and wise to sweep them away into the limbo of the ancient notations.

There remains little difference of opinion as to the desirability of simplifying all our tables of measure. The proposition made some years since to introduce the metric system, found considerable favor, and we believe the failure of that proposition to have been largely caused by the opposition of those manufacturers upon whom the expense and annoyance of a change of standards of measure would have borne heavily.

In view of this experience, attention has been turned to reforms less sweeping, but still desirable. Among these we count the substitution of decimal for duodecimal subdivision of the standard foot. This is not radical, for the standard would not be changed. We suggest only the decimalization of the *fractions* of this standard unit of measure. The advantages resulting from such a change are obvious to all, but we may mention here:

1. Greater ease of operation in written calculations.
2. Greater certainty and rapidity in mental operation with numbers of measure.
3. Decreased liability to error in figuring drawings or in indicating any given dimension, said errors often arising from a mental confusion, caused by computing numbers decimally and duodecimally in the same operation.
4. A general saving of time and anxiety ensuing from the abandonment of a slow and complex method of work for one simple and rapid.

The American people could hardly be now persuaded to use any other than a decimal system of coinage. Neither can we believe they would abandon decimal systems of measure, whether complete or partial, if such could be fairly introduced to general use.

On the other hand must be contemplated the cost of the proposed change. To the professional men interested this does not appear to be serious. But to the manufacturers of many kinds of products, it would occasion considerable expense and annoyance. We apprehend that manufacturers of mechanisms generally would find it more difficult to acquiesce in the change, than would other classes.

Your committee are, therefore, of the opinion that a period of debate and of preparation is necessary; that a general agreement must be sought upon the subject by a large and influential number of the interested professional men and of certain manufacturers.

It may be true that architects, if united could, in their own work, adopt the proposed change, and possibly after a time bring others to their support, but the building profession and trades are so closely dependant on the products of the mills that they would be annoyed in manifold ways by the conflict of measurement.

These opinions are not based upon a *thorough* investigation of the subject, nor fortified by inquiries reaching into all parts of the country.

In view of these limitations, your committee respectfully recommends that the Western Association of Architects appoint a committee of three or more, whose duty it shall be during the ensuing year, to confer personally or by correspondence, with representatives of the American Institute of Architects, the several civil and mechanical engineers' societies, and the leading interested manufacturers of the country, to seek with them for a common line of action, and to ascertain from many sources if this reform be practicable. We further recommend, that following such appointment, an official notice of such action by this association be forwarded to the societies and others above named, asking for the appointment of similar committees on their part, or for such other consideration of the subject as to them may seem wise and proper.

D. W. MILLARD, { D. W. MILLARD,
For the Committee { T. B. ANNAN,
E. T. CARR.

My colleague, Mr. Annan, of St. Louis, finding that he could not be present, has forwarded the following notes upon the subject:

"There can be no question as to the vast economy in time and labor which such a change would effect. If that man is a benefactor who makes two blades of grass grow where grew one before, then as well is he a benefactor who makes one figure answer where two were before required. The self-evident character of the benefits to be derived almost obviate the need of logical argument. It is only necessary for one to undertake a simple multiplication of 2 feet $7\frac{3}{4}$ inches by 3 feet $9\frac{3}{4}$ inches to convince himself of the folly and waste of time of the present stupid adherence to a practice, respectable only on account of its age. Another and more practical illustration has occurred within my own experience. It was sent some years ago to my employer in company with a sworn measurer to measure up the quantities of plastering in a recently finished house adjacent, hut of a different plan. My companion with his assistant used the ordinary tape line and subdivision of twelfths, while I used an engineer's line with the decimal subdivision. My measurements and reports were made and rendered the same day. The sworn measurer's statement was not ready until late the day following, and was then corrected by my figures, which, after two or three tests, were found to be more correct, and infinitely easier of apprehension.

"The necessity for reform in this matter has been emphasized by both the French and German governments in their adoption of another method—the metrical system. In the latter country the change was brought about in this way essentially. A law was passed changing the old cumbersome system to the metrical system, the change to go into effect five years after the date of the passage of the act, and meanwhile in all the schools throughout the empire the metrical system was taught and the old system ignored. The very natural result followed that at the time appointed the new and better system quietly went into effect, without hitch or jar. The process of education had been going on in the schools and at home, the new generation knew only the better system; the fathers, mothers, uncles and aunts learned it from the children—and the thing was done.

* The paper is published elsewhere in this issue.

"In 1876, the centennial year, as many members of the Western Association of Architects will recollect, there was circulated extensively, and almost as unanimously signed, a petition or paper in the nature of a memorial to congress for the adoption of the metrical system by the general government. It met the fate of most such unselfish efforts, but its advocates, I believe, were not and are not now discouraged, for I am informed that they have a living organization, with means, intelligence and some literature at their command. To inaugurate a movement of this kind with the hope of success, it must be national, not local nor sectional. It would not do for the architects of a single state in convention assembled to boldly declare their independence of antique but inconvenient custom, without the hearty concurrent action of their neighbors east, west, north and south of them, and the limit of the definition of neighbors could result in a geographic definition of the boundaries of our country. The change is one which will, if wrought at all, be brought about gradually and only by a persistent and systematic effort on the part of the members of this association, working harmoniously in conjunction with the other liberal and scientific societies of the country. It is, therefore, my view that this association should, if their wisdom so direct, appoint a committee of conference, whose duty it should be to enter at once into correspondence with the various scientific and other bodies of the country having this matter in view or in interest, to elicit from them such further information, advice and assistance as may best further the changes sought to be made and to report the result of their labors at the next annual convention of this association. Without a more complete knowledge of what is doing and has been done by others in the same or nearly adjacent fields, we cannot work intelligently or harmoniously; one discouraging fact is this, that engineers have been using this system for years for their own convenience and then *retranslating* their decimal work into duodecimal terms, because contractors and others will not learn the better, or unlearn the more cumbersome method. That is the case in the city engineer's office in St. Louis and is doubtless paralleled elsewhere. What, then, is the remedy for wilful adherence to a recognizedly burdensome custom? Clearly that question has been answered by the action of the German government, and if we hope for any such measure of success as they have attained, we must begin as they did, and get our foundations right; then and not till then shall we have begun a house not built upon sand. Patience must be called to her work, for immediate results are not to be expected."

The following letter bearing upon the subject was also received.

D. W. MILLARD, Esq.: LEAVENWORTH, Kan., November 16, 1886.
DEAR SIR,—In reply to yours of the 9th inst., concerning the report to the Western Association of Architects of the committee appointed last year to consider the propriety of adopting the decimal division of the standard foot, I have to say, that on account of sickness in my family I cannot be present to assist you, very much to my regret. I am heartily in sympathy with the proposed change, or any move that may tend toward that end.

I have talked with many during the year, and have found the sentiment generally in its favor, but the question seems to be, How shall it be done?

I am of the opinion that each branch of the mechanical industries of the country must lend a helping hand. The architects in convention can resolve to adopt the system, and if persistently adhered to by all, will accomplish something. Those in charge of railroad shops can do much. The machinists as much more. The civil engineers will help, and so on through the list. A large portion of them have their organizations, and if they can be induced as bodies, to make a move in the proper direction, I believe the object may be accomplished. The next question is, who is to move, how, and when?

I am not prepared to report on any plan at this time, and believe it would be best to wait another year before attempting to do so. As the question has been sprung, I hope it may be fully discussed during the coming session of the Western Association, with the view, if favorably considered, of devising some means of securing the coöperation of all parties interested.

My own suggestion would be the appointment of a committee to prepare a brief address to the various mechanical societies of the country and others interested, and thereby obtain their views on the subject, and if favorable, their coöperation, this committee to report at the first meeting of the association following, with such suggestions as they may deem proper. Respectfully, E. T. CARR.

A Member: Does that mean to divide the foot into ten equal parts?

The President: Yes, sir.

Mr. Patton: If remarks are in order upon that point, I would object to the appointment of such a committee, as I would regard it of very little use. I should favor very much the metric system. It seems to me to divide the foot into ten equal parts would be of very little advantage, and very difficult to introduce.

Mr. F. Baumann: Having heard these remarks—which, I confess, somewhat astonish me—I would like to say that I did not believe such opposition among architects against any such a movement as is here offered. I will only say that in Germany they have had the duodecimal system for centuries, and a very mixed one, and no change in it has made very much more commotion than it would make here, where there is only a partial change to be made; and yet it was done, and everybody was satisfied, and I believe everybody would be here. It is a system which is only in accordance with good, ordinary, sound common sense, and there is little trouble with it, but everyone should be willing to have that trouble overcome, and I will say, for that reason, that I am very much in favor of the motion.

Mr. Jenney: In the French system the unit of measure is also the unit of weight. A cube of maximum density weighs a kilogram, and it is that that helps out that system so immensely. If we are going to make any change at all, we should take the metric system in toto.

Mr. President: In reference to this matter, I desire to add my opinion to those expressed by Mr. Patton and Mr. Jenney, and I wish particularly to refer to the remarks of Mr. Baumann and the changes he referred to as having taken place in the unit of measurement in Germany. The change that was made there was a radical one, such as that proposed by Mr. Patton and Mr. Jenney; it was a change to the metric system, embracing not only measures of length, with which we deal, but all others—of value, of weight, etc.; and I think it would be injudicious if we, as architects, were to propose the adoption of merely a little trifling reform, referring only immediately to the one unit of measure employed by ourselves in our work. If we really desire the decimal system, we should unite with other professions who are endeavoring to secure the adoption of the metric system; and while there is now no motion before the house with reference to this matter, as there is nothing but the consideration of the report of the committee on using the decimal notation of the foot, it might be well to suggest that the sense of the association be taken with reference to its attitude as regards a wider range of action; that is, as regards the adoption of the metric system as a whole; and I should be very glad to hear a little wider expression of opinion on that subject.

Mr. Baumann: Is there any movement going here to adopt the metric system?

A Member: Yes, sir.

The President: What is your pleasure in regard to this report?

Mr. Yost: This seems to be a very interesting subject, and I suggest that it be not hastily disposed of. I move that its consideration be postponed for the present, and taken up at some future time.

The motion of Mr. Yost was seconded and carried.

Adjourned.

SECOND DAY—AFTERNOON SESSION.

THURSDAY, November 18, 1886.

The President: Is there any business which any of the gentlemen here wish to present to the convention before we proceed to the reading of papers? If not, I will request Prof. Ricker to read a paper which he has been kind enough to prepare for this convention. Gentlemen, I have the honor of introducing Professor Ricker, President of the State Industrial University at Champaign, Illinois.*

The President: The Executive Committee wishes to report the names of some applicants for membership.

Sidney Smith: In view of the resolution that was passed this morning, would that refer to the names of members not proposed?

The President: One of these I know is a member of the association.

Mr. Root: The first of these names is that of Mr. Henry Walters, of Louisville, recommended by Mr. Crapsey; the other is that of Mr. M. F. Hair, Dubuque, member of the Iowa State Association, recommended by Mr. Adler.

The President: If there is no objection, both of these gentlemen will be declared members of the Western Association.

The secretary read the names of Messrs. E. J. Eccles, member of the Missouri State Association, and also Henry T. Kley, of Chicago, recommended by Mr. Schaub.

It was moved and seconded that the secretary cast one ballot in favor of the election of these gentlemen.

The motion was carried, and they were declared duly elected.

The President: Gentlemen, I have the pleasure of introducing to you Mr. Isaac Hodgson, of Minnesota, who has been kind enough to prepare a paper for us.

Mr. Hodgson: Mr. President and gentlemen of the convention: During the few spare hours I have had in this great city, I have jotted down a few remarks on what I may entitle, "Hints on a National Style of Architecture."*

The President: There is still another paper on the programme for this convention. Mr. E. H. Ketcham, of Indiana, has been kind enough to prepare for this convention a paper embodying the results of his experiences in the erection of insane asylums, and as there is still a half hour or more at our disposal, would Mr. Ketcham be kind enough to favor the convention with the reading of his paper?*

After listening to the interesting paper presented by Mr. Ketcham the meeting adjourned.

THIRD DAY—MORNING SESSION.

FRIDAY, November 19, 1886.

The president called the meeting to order at 11 A.M. and requested Mr. Flanders to act as secretary *pro tem* during the momentary absence of the secretary.

The President: I find on my table the following resolution moved by N. S. Patton:

Resolved, That the report of the Committee on the Decimal Division of the Foot be received and placed on file.

Resolved, That this association recommend the adoption of the metric system of weights and measures, and that the president appoint a committee whose duty it shall be to correspond with other organizations interested in this subject, and, in connection with them, petition congress to pass a law making the use of the metric system compulsory after a reasonable period.

The resolution was seconded.

A Member: Do I understand that the tendency of this motion with regard to the metrical system is to bind us to its use?

The President: No, sir; the object of the resolution is that this association declare in a general way that it is its sense that the adoption of the metric system throughout the United States is desirable; and, next, that it coöperate with a number of other associations who are advocating the adoption of the metric system in the United States, and that all of these associations jointly petition congress to cause the adoption of the metric system after giving a reasonable period of warning for purposes of preparation, something similar to what was done in Germany, as Mr. Baumann told us yesterday, where the metric system was adopted with the notice that it would be introduced and would become a measure of length, of contents and of weight after five years from its passage. From the date of the passage of this enactment, instruction in the schools was confined to the metric system; all children in the schools learned its use, manufacturers changed their gauges and their tools so as to adapt them to the uses and wants of the metric, and the people generally familiarized themselves with it, so that when the change came it was made without difficulty and without friction. The young had been taught that the sooner they became acquainted with it the better, and the older ones had already familiarized themselves to some extent with it. The five years elapsing between the passage of the law adopting the metric system and its actual adoption gave the manufacturers opportunity to make the necessary changes without undue expense; and I presume that the actions of the associations that have already been formed in this country for urging the adoption of the metric system will advocate a similar course of procedure, and that no sudden revolution will be attempted; it would be useless to attempt it anyway, because it would never be successful. I understand the metric system is already legalized in this country, and that we are at liberty to use it to buy and sell goods with, but, of course, it is impossible for any individual or body of men to adopt the system unless it is universal, and the only way to make it universal is to have a law making its use compulsory, as has been done, I believe, in most of the continental cities and countries of Europe; making its use compulsory from a certain date, of course, and leaving a sufficient number of years for it to adopt itself, and all the public schools teach it for years—I think the majority of the children are tolerably familiar with it; and it would certainly be a very light labor for us as architects to change from one system to another, though we cannot change it by ourselves.

* The paper is published elsewhere in this issue.

The secretary again read the resolution, which was carried.

The President: Is there any report from the Board of Directors?

The Secretary: The Board of Directors have two amendments to the constitution and by-laws to suggest: The first is that in section 4 of the constitution, the second clause be stricken out. I will read the whole clause so that you will understand it:

All members in good standing in any state association organized under the laws of that state, also all members of the American Institute of Architects who shall become subject to the constitution of the Western Association, are by virtue of such membership fellows of this association.

The President: It will be observed, gentlemen, that the resolution offered by your Board of Directors does away with the privilege now granted other state associations and chapters of the American Institute to elect members for us. It is not proposed to touch that clause by which members of those organizations are admitted without payment of an initiation fee, but it is the intention of the Board of Directors in offering this amendment to our constitution, to take away from other bodies organized perhaps without our knowledge of the character and standing of their members, to take away from those bodies the right to dictate who shall be members of this body, and to put the members of state associations and of the American Institute on precisely the same footing as anyone else who wishes to join this organization, as regards the desirability of his membership in this association—leaving that with us. The question remains as before. Is there anything to be said by any of you, gentlemen?

The amendment was called.

The Secretary: The second amendment relates to the same section, which shall read:

Honorary members of this association may be elected upon the recommendation of the Board of Directors, but all fellows of the association shall become honorary members when after three years honorable standing as fellows, they resign the practice of architecture. Honorary members shall not be entitled to vote, nor be eligible to office, nor shall they be assessed for dues or initiation.

The President: You have heard the recommendation of your Board of Directors. You will observe that its main purpose is to extend the limits of honorary membership, and to define the status of those engaged in the honorable practice of their profession who shall retire from the same, either for the purpose of retiring from the business entirely or for the purpose of following other pursuits. Your directors individually recognize the fact that many who have been members in good standing in this association and with whom we like to associate, whom we like to meet at our conventions and other gatherings, may, for good reasons of their own, see fit to change their pursuit; this enables us to retain the fellowship of these gentlemen without giving them such privileges as regards voting and holding of office as are enjoyed by those who are practicing actively the profession of architecture. Does any one wish to speak upon this resolution? Those who are in favor of its passage will please signify it by rising.

The motion was carried.

A petition that the association discontinue issuing its official proceedings through the channel of an official journal, having been presented to the convention by a combination of six journals, Mr. Randolph offered the following:

Resolved, That we reconsider the action taken when we appointed an official organ.

The resolution was carried.

Mr. Corser: I think the best way for this association is to publish its own proceedings in pamphlet form, under the direction of the secretary or some other duly authorized official.

Mr. Root: The publication of this report in pamphlet form, although it may be desirable to do so by the association, is a matter involving considerable expense. The funds of the association are not limitless, and a committee should go into it with fairness and report back the details of this scheme, so that we can act upon it with full information.

A Member: What is to be published in THE INLAND ARCHITECT would probably cost in the neighborhood of \$1,000, and I understand that all that is for the benefit of the association, free of any expense. The other way it will cost us \$300 or \$400.

Mr. McLean: While I have nothing to do with this discussion, I would like to explain that the last convention number of THE INLAND ARCHITECT was issued within two weeks after the closing day of that convention, and sent to the most perfect list of architects probably existing in the United States, and to a large number besides, including the British Institute, and all the architectural associations in Europe and elsewhere, and if any member did not get it, it was the fault of the mails.

A Member: Mr. President, I do not feel at all disposed to find fault with "the bridge that carries us over"; I feel, as no doubt a large number of others do in the room, under very great obligations to THE INLAND ARCHITECT. It has done much to build up the profession in the West, and as such I am disposed to give it all credit and honor; but at the same time I do think that this body, while it might have an official organ, certainly ought to issue its proceedings under some official committee; it seems to me there ought to be a publication committee, or it ought to be issued under the authority of the Board of Directors. I would favor some such movement as that.

After considerable discussion, a resolution was passed, authorizing the Board of Directors to publish the proceedings in pamphlet form, to employ a stenographer in the future, and the motion made two years ago, making THE INLAND ARCHITECT AND BUILDER the official journal was reconsidered and laid on the table.

Mr. Hellmers: While I dislike, at this late hour, to bring business before the convention, I think there were some matters passed over yesterday rather hastily, that well deserve to be reconsidered, and one of those is our method of electing new members. We decided yesterday to elect new members by ballot, but we made no provision of the time when applications for membership should be presented to the Executive Committee, leaving it in the same bad shape that it now is, that these names are brought in the day before the convention meets, and give us no time to look up the record or consider the standing of the applicants; and I move that this be added to our clause covering the election: That all names of candidates be presented to the Board of Directors and by them sent to all members

of the association thirty days before the meeting of the convention. That will give to members who did not attend, but still know something of these candidates, which, if the convention knew, would, perhaps, prevent our electing them, an opportunity to send to the secretary of the association their objections to the men, and then cast their letter. The motion is in writing.

The President: It is moved and seconded that the following be added to the resolution passed yesterday, regulating the election of new members:

Resolved, That all names of candidates be presented to the Board of Directors, and by them sent to all members of the association thirty days before the meeting of the convention.

The motion was carried.

A Member: Are there any rules of order adopted by this association?

The President: Roberts' Rules of Order. Before proceeding to the election of officers, which perhaps is the only business remaining to be transacted by the association, I wish to call attention of the members to the position of several architectural associations formed about the country, with the ostensible purpose of coöperating with, or coalescing with this association. These associations call themselves city associations—for instance, there is the Buffalo Society of Architects. The members of these associations desire admission to membership in this association upon the same conditions as those allowed the members of state associations; that is, the remission of the initiation fee. I think it would be good policy if this association were to acknowledge such legal organizations; and I will retire from the chair long enough to offer as a motion, this:

Resolved, That the members of local architectural associations in cities where no state organization exists, be allowed the privileges of members of state organizations as far as the admission to membership without initiation fee is concerned.

The motion was seconded.

Mr. Randolph: I would like to offer an amendment to that. I think that may get us into some trouble. I think it would be better if that matter was referred to the Board of Directors with power to act, in whom we have implicit confidence.

Mr. Illsley: As I understand the motion, it is not that we admit these members, but that we remit the initiation fee. By previous action the election of all members has been placed with the association, and no state association or others are entitled to have its members admitted. But if we do admit them, shall we charge them an initiation fee?

Mr. Randolph: I understand it precisely as Mr. Illsley does.

The President: You have heard the substitute of Mr. Randolph, that the resolution I have offered be referred to the Board of Directors.

Motion was carried.

The President: Are the committees on nominations for the place of meeting for the next convention, and election of officers for the ensuing year ready to report?

The committees not being quite ready, the president continued: Among the papers prepared for reading at this convention is one by Mr. Illsley. It was impossible to read the same yesterday because of the absence of Mr. Illsley. It would properly come up for reading now before proceeding with the election of officers.

Mr. Illsley: On account of the lateness of the hour, I have not the face to trespass upon your patience longer, and I offer this resolution: that this paper be considered as having been read, and be published with the proceedings. The suggestion was accepted.

The President: I have here the reports of the two committees on nominations. One committee reports as follows:

Your committee to select the location for our next convention, and to nominate officers for the ensuing year, begs leave to present the name of Cincinnati, Ohio, as the most favorable location; and also to present the following names for officers for the ensuing year: For president, John W. Root; for secretary, J. F. Alexander; for treasurer, S. A. Treat; for directors: G. W. Rapp, C. Crapsey, D. H. Goodwin, D. Adler and C. C. Hellmers.

The other committee reported as follows:

Place for holding the next convention: Chicago.
For president: Sidney Smith; secretary, J. W. Root; treasurer, G. W. Rapp.
For directors: D. H. Burnham, Wm. Holabird, C. L. Stiles, G. M. Goodwin, C. C. Hellmers Jr.

Mr. Crapsey: Coming from Cincinnati, I feel honored that the committee have recommended that city for the holding of the next convention, and on behalf of the Ohio state association and particularly of Cincinnati, I desire to say that we will be very glad indeed to have you all present next year. I hope that Cincinnati will be selected as the place for the next convention. To be sure we cannot offer you anything like the architectural beauties and magnificence of Chicago, but we can offer you something in the way of scenery that you have not got here. Cincinnati is a good deal like the city of Zion we have read about: It "stands with hills surrounded." I hope that you will appoint Cincinnati as the next place of meeting and that you will all be present.

Sidney Smith: I rise to offer a proposition for your acceptance. I withdraw my name as nominee for president in favor of Mr. John W. Root, and at the same time offer a resolution that his election be made unanimous.

The President: I suppose it will be necessary for Mr. Root to cast one ballot for himself. It is moved and seconded that the secretary be instructed to cast one ballot for Mr. John W. Root for president of this association.

Mr. Root was unanimously elected president.

Mr. Root: Gentlemen, this is certainly a very embarrassing position for a man to be placed in. I can never appropriately describe to you my gratitude for the honor you have conferred upon me, and can only say that in the discharge of the duties that may devolve on me I shall do my best to satisfy you, and if hard work will accomplish it I shall promise that you will all be satisfied. (Applause.)

The President: The ballot upon fixing a place for the holding of the next meeting is as follows: 56 votes in favor of Cincinnati, 31 in favor of Chicago, and 4 for St. Paul. The sense of the convention, therefore, is to hold the next convention at Cincinnati.

The President: While the ballots are being taken, I wish to announce to the convention that it has been determined by Mr. Root and myself to postpone the announcements of standing committees until we shall have had time to take counsel as to the best appointments to make. It will be done before the members leave the city; those who are upon committees will be notified, and due publication will be made.

The Secretary: I would like to say on behalf of the Executive Committee, that in the matter of certain complaints received from the State of Indiana, made by individuals against certain members of the association, the Executive Committee has passed the matter over to the next executive committee for their action, deeming it to be a matter that the future executive committee could act upon with considerably more information, and with probably better results, than the present outgoing committee; so that in the relations of all petitions, in the matter of unprofessional conduct with members of the association, the future members of the executive committee will take definite action.

Mr. Hellmers: As Cincinnati has been selected as the place for our next convention, and as my name appears upon both of the tickets much against my will, I would request that the committees presenting my name place a Cincinnati man on our ticket to take my place, thereby giving the majority of the Board of Directors in Cincinnati, which they very much need, and I will assure the members of this association that my labors will be just as earnest and as well-meant as they would be in any position they could put me.

After some discussion, Mr. C. A. Curtin, of Louisville, Ky., was placed in nomination.

The President: The Board of Directors send in the names of two applicants for membership: W. W. Carlin, of Buffalo, recommended by Mr. Alexander; and Mr. Geo. W. Thompson, of Nashville, recommended by Mr. Alexander.

Mr. Ketcham, having moved that the ballot be dispensed with, and that the secretary be instructed to cast one favor vote for each gentleman, the motion was seconded and carried, and the gentlemen were declared duly elected to membership.

A Member: I move that the thanks of the association be extended to the Illinois State Association, for their very generous hospitality.

The motion was unanimously carried.

Mr. Rapp having withdrawn in favor of S. A. Treat, Mr. Treat was unanimously elected treasurer.

President.....	John W. Root,
Secretary.....	J. F. Alexander,
Treasurer.....	S. A. Treat.

BOARD OF DIRECTORS:

Dankmar Adler, chairman.....	Chicago.
George W. Rapp.....	Cincinnati, O.
Charles Crapsey.....	Cincinnati, O.
G. M. Goodwin.....	St. Paul, Minn.
C. A. Curtin.....	Louisville, Ky.

The convention adjourned, to meet the third Wednesday in November, 1887, at Cincinnati, O.

Boston Master Builders' Association,

AT a special meeting of all the members of the Master Builders' Association, of Boston, several hundred in number, held October 5, the following code of working principles for the year 1887 was unanimously adopted:

The Master Builders' Association, of Boston, after conference with the real estate owners and architects of the city upon certain aspects of the labor question, do hereby adopt the following code of working principles, in the hope that it will be accepted by all concerned as a rational and conservative method of meeting labor agitation in its relation to the building trades:

ARTICLE I.

Change in method of payment for labor performed—Beginning at a date not later than the first day of April, 1887, we will pay for all work performed by journeymen or laborers in our various trades at a certain price per hour. This price per hour shall be a matter of agreement between the individual workman and the individual employer.

This change is not intended to apply to work known as "piecework" or work "by the year."

ARTICLE II.

Hours of labor—In order to test rationally the question whether ten hours per day is too long for men to labor, and whether a less number of hours can be accepted as the measure of a day's labor without seriously retarding business enterprises, we will begin the first day of April, 1887, to work nine hours in each working day, beginning at seven o'clock A.M. and ending at five o'clock P.M., with the usual hour at noon for dinner, under payment by the hour, as set forth in Article I. All work done before seven o'clock A.M. and after five o'clock P.M. to be paid for as overtime at such price as may be agreed upon by the workmen and employers.

We will continue on this plan during the year 1887.
If it is demonstrated that this change can be made without detriment to the interests of the workmen or the owners, then the contractors will be satisfied, and if further reductions seem desirable, they can be considered at the close of the year, when this experiment shall have had a fair trial.

If, however, there should be displayed a desire to disturb this trial by bringing on any general strike during the year 1887, then we shall feel at liberty to return at once to the old standard of ten hours.

ARTICLE III.

Protecting clause in contracts, etc.—For the greater security of the contractor, we will demand the insertion of a clause in every building contract relieving the contractor from any forfeiture or demurrage on account of delays caused by strikes. (This demand, we are assured by real estate owners and architects, will be cheerfully granted.)

In case of a general strike, those men who wish to work and will work, will be kept employed as long as there is anything to be done, and will be protected in their employment, provided they do not aid and assist the strikers by contributing to their funds; but men who engage in the said strike will not be reemployed until the said strike is completely over, or until they, as individuals, are willing to go to work on the same terms as above stated. In the event of a strike in any one special branch throughout the city, the men who will continue at work in that special branch will be kept employed the same as in a general strike, and all other branches of building will be continued with such men as will not contribute to support the strike.

When a point shall be reached upon any building or buildings where further progress is blocked because of the said strike in a special branch, then the contractors in that special branch shall not be pushed or forced by their co-contractors to complete their work, but the said building shall be allowed to remain incomplete till a reasonable and satisfactory settlement be reached.

ARTICLE IV.

Improper interference with business—Certain workmen have of late very improperly interfered with the carrying on of work by striking, or threatening to strike, for

the most trivial causes. As follows: Because certain other workmen were employed; because certain workmen were not employed; because certain workmen were discharged; because certain stock was used or was not used; because more than a certain number of apprentices were taken on, and for other equally untenable reasons. They have also intimidated certain fellow-workmen by threatening that they would prevent their getting employment by refusing to work with them unless they joined certain societies. Such practices we condemn as most unfair and intolerable, and we agree that in case any workmen interrupt and embarrass our operations by such procedure, we will promptly discharge them and notify our fellow-members of the discharge. We also agree that all conspiracies shall be prosecuted to the extent of the law.

ARTICLE V.

Arbitration—It shall be, as it always has been, the recognized right of the group of workmen in the employment of any individual contractor in the building trades, to demand and receive from their employer a hearing upon any grievances that may arise, or any changes that may be desired, and at this hearing they can elect to be heard through a spokesman chosen from their number, or by their individual voices, but no person outside the employment of the said contractor will be allowed to represent them. If amicable ground of settlement is not reached through such hearing, then the grievances shall be left to arbitration (should the terms of such arbitration be mutually agreed upon by the employer and his workmen) in the same manner that other business disputes and complications may be settled.

AGREEMENT.

We, the undersigned, in our individual capacities as contractors in the various branches of constructive work used in the erection of buildings, and as members of the Master Builders' Association, of Boston, hereby mutually agree that we will aid, support and assist each other in maintaining the same stand against improper dictation as that taken and successfully held by us during the strike of May and June, 1886.

We pledge, in addition, that we will aid, support and assist each other in carrying out the letter and spirit of the propositions above described as our code of working principles for the year 1887.

We further agree that should we differ from the opinion of the majority of our fellow members, we will not in any way embarrass their purpose, but, recognizing the fact that uniformity of action is necessary for the proper trial of a scheme like this now proposed, we will faithfully carry out and support the plan agreed upon by the majority during the year 1887, and agree that any member deviating from the action decided upon by the majority will be considered amenable under Section 3, Article VIII, of our by-laws.

In testimony of our assent to the agreement and propositions before mentioned, we hereunto affix our signatures, and agree to faithfully adhere to the principles set forth.

We invite all contractors in the building trades, whether located in this city or in any of the cities of New England, to join with us in this attempt to make fair trial of a scheme calculated, we trust, to set at rest labor agitation in our trades, and maintain unimpaired that necessary control and authority, without which no enterprise can succeed. We invite all such contractors to call at our rooms and append their signatures to this code of working principles.

WILLIAM H. SAYWARD,
Secretary M. B. A.

Manual Instruction in the United States.*

SOME idea of the need of instruction in the mechanic arts in the United States was probably present in the minds of the senators and representatives when the Land Grant Act of 1862 was passed. A clause in this act reads as follows: "The leading object shall be, without excluding scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts in such manner as the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." The report of the Secretary of the Interior on industrial education, 1882, gives a list of forty-two different schools and colleges in various parts of the union which owe their existence to this land grant. Most of these are agricultural and engineering colleges. The words in the act in regard to teaching such branches of learning as are related to the mechanic arts being usually interpreted to mean instruction in the use of carpenters' and machinists' tools. Of these land grant schools, the best known are the Massachusetts Institute of Technology, in Boston, and the Hampton Institute, at Hampton, Virginia. Each of these illustrates an interesting experiment in industrial education.

The Massachusetts Institute of Technology might properly be called a school for foremen, as its graduates can be found superintending industrial establishments all over the United States. The pupil in weaving, for instance, is required to design or copy a pattern, and then work it out on the loom. In molding, he makes a drawing, models the wooden pattern from it, and casts the pattern in the metal. The course of instruction is four years, mathematics, chemistry, history and the modern languages forming a part of the educational scheme. Hampton Institute was founded by General S. C. Armstrong as a normal school for colored teachers. General Armstrong, while serving as a staff officer at Fort Monroe, during the war, was brought in contact with the fugitive slaves who took refuge at the fort.

When slavery was abolished, and four millions of men, women and children became the wards of the nation, General Armstrong conceived the idea that they could best be educated and civilized by the aid of their own people. It was as necessary to teach this vast multitude, who had never been beyond the sound of a master's voice, how to work for themselves, and how to care for themselves, as it was to teach them to read and write. Manual instruction was therefore a necessity at the Hampton Institute. The male graduates were to be leaders on the farm or in the workshop, as well as teachers. The female graduates were to be capable of cooking, sewing, or caring for the sick. How thoroughly and successfully this scheme has been carried out need not be stated here. Another type of the industrial school is to be found in the Worcester (Mass.) Free Institute. At this institution three and a half years of general education is combined with instruction in mechanical engineering, in carpentering, and in machinist's work. This school more nearly approaches the trade school, as many of its graduates are returned as "journeymen mechanics."

The Worcester school was founded by private liberality. Without such aid, it may be added, neither the Massachusetts Institute of Technology nor Hampton Institute could have reached its present usefulness. In the European technical schools provision is made for instructing young men already in the trades by a course specially adapted to their wants. In this country this important branch of industrial education has received but little attention. The Carriage Makers' Association in this city maintain a school in designing and construction for the young men in their trade. The Master Plumbers of Philadelphia, Baltimore and Chicago have plumbing schools for their "helpers." The Cambria Iron Works in Pennsylvania, and several private firms like R. Hoe & Co., of this city,

give scientific instruction to their lads, while two railroad companies, the Pennsylvania and the Baltimore & Ohio, have shown not only what is possible to do, but how much can be done at a trifling cost for the young men in the employ of great corporations.

Beyond this short list, little has been done to supplement shop work with systematic instruction. In the Baltimore & Ohio Railroad Company's shops at Baltimore five hundred young men are employed. They are placed in charge of a graduate of the Stevens Institute, whose duty it is to see that they are not employed too long at one kind of work. He can change their work as often as it may seem desirable for their future interests. He can also take parties of them from their work at any time to explain to them the machinery they may be engaged upon or may see around them. A neat building has been erected for their use, which contains a library and class rooms for instruction in mechanics and drawing. The lads are required to wear a uniform, which, besides giving them a jaunty appearance, tends to habits of personal neatness. What is done by the Baltimore & Ohio Railroad Company could be done in any manufacturing town by the union of a few large employers. * * * *

Manual instruction has already been incorporated in the public school systems of Boston and Philadelphia. The New York Board of Education has maintained for several years a workshop at the Free College. It now proposes to open schools all over the city, where boys and girls will be taught to use their hands. A great impression was made last spring by the exhibition, held by the Industrial Education Association of New York, of children's handiwork, and of the different methods of teaching them how to work. Not only was it shown what varied and excellent work little fingers could do, but school teachers and superintendents came to testify that the brainwork was benefited by the handwork.

Obituary.

AT a meeting called on November 20 for the purpose of taking action regarding the death of Daniel Goodman, the following resolutions were passed:

WHEREAS, We learn with regret that Mr. Daniel Goodman, one of the earliest builders of Chicago, has departed this life on November 18, 1886; now, therefore, be it

Resolved, By the builders of Chicago in special meeting assembled, that we join in bearing testimony to his sterling character as a man, to his unchallenged honesty and integrity as a contractor and citizen. To know him was to esteem and love him, and those of us whose privilege it has been to meet him frequently during the thirty-two years he spent in this city, have lost a true friend, good neighbor and genial companion.

Resolved, That the above be given to the press for publication, and that a copy thereof be engrossed and forwarded to the family by the secretary.

BUILDERS' AND TRADERS' EXCHANGE, Chicago, November 20, 1886.

Eulogistic addresses were made by W. W. Boyington, George Tapper, Cornelius Price and J. W. Hambleton. The resolutions testify to the character and integrity of Mr. Goodman as a citizen and contractor.

Daniel Goodman was born in Ware, Herfordshire, England, May, 1829. He learned the trade of a mason from his father, and desiring to better his condition emigrated to America in 1854. Poor in purse but rich in hopes, his early struggles are but a repetition of all our early pioneers, realizing that knowledge is the Archimedian lever that moves the world, he devoted his energies to hard work at his trade during the summer months, and husbanding his resources attended the Williston Seminary, of Massachusetts, during the fall season, thus laying the foundation for his successful career. When feeling fully armed for this world's battle he moved to Chicago, in 1854, arriving here during the cholera epidemic. He then formed a partnership with his life-long friend, W. Hambleton, and the firm of Hambleton & Goodman constructed many of the old landmarks of the city. After a few year's residence here, finding his health failing, he returned to England, but, after a short visit, came back to Chicago, and resumed business on his own account. For the past twenty years Mr. Goodman has been a sufferer from insomnia, and though successful in his business transactions, his life has been one of long suffering, and it was a relief to him when he could say: "Weary, weary, O Lord, I lay down my burden and trust to Thy divine goodness."

FOR several years the Michigan Central has had in its Atlantic express a most admirable and convenient through car line from Chicago to Boston and other New England points, and its popularity has steadily increased. It has enjoyed a great advantage over its competitors, not only in the directness of its route and the splendid scenery of Niagara Falls, Central New York, the Mohawk, Hudson, Housatonic and Connecticut valleys, and the Berkshire Hills, but in its connections with the great four-track New York Central and double-track Boston and Albany and its splendid equipment, making fast time with sureness and with safety. So the travel has steadily increased by this favorite route—"the great Central route, via Niagara Falls," as it is called—until the management has seen its way clear to another step forward in the interests of the traveling public. The Michigan Central has, in addition to its through Boston service on the Atlantic express, leaving Chicago at 7:45 P. M., placed a new and elegant sleeping-car on its New York limited express, leaving at 3:10 P. M. The already fast time of this train has been so shortened that it arrives forty minutes earlier at Buffalo and fifty minutes earlier at Albany. Here the Boston sleeper is taken by a new fast train of the Boston and Albany Railroad, leaving Albany at 4:05 P. M. and arriving at Pittsfield at 5:33 P. M., Springfield at 7:10 P. M., Palmer at 7:41 P. M., Worcester at 8:54 P. M., South Framingham at 9:33 P. M., and Boston at 10 o'clock P. M., instead of 6:25 next morning, as formerly. Hartford is reached at 8:55 P. M. and New Haven at 10:10 P. M., via Springfield. As this car does not leave Chicago on Saturday, passengers on the Limited on that day change cars at Springfield and Albany, arriving at Boston at 10:30 P. M., on the fast train from New York. A great feature of the ride to Boston by this train, beside the great saving of time, is that Niagara Falls is seen in the morning from the splendid outlook of Falls View, and the beautiful and picturesque scenery all the way to the mountains beyond Pittsfield is traversed by daylight.

*Col. R. T. Auchmuty on "The Need of Trade Schools," in the *Century* for November.

PUBLISHERS DEPARTMENT.

Fireproofing, Fireclay and Paving Tile.

WHEN John B. Goss, associate of the Royal Institute of British Architects, as holder of the Godwin Bursary for 1885, visited the United States and, returning, read a paper upon "Some American Methods" before the Royal Institute. The subject of his exhaustive paper and the extensive sketches submitted was largely that of protection against fire in vogue, giving especial attention to incombustible or fireproof construction. As America is the home of that best and most adaptable method, the use of hollow fireclay tile, and it first came into use in Chicago, it is not strange that its development has rapidly increased within the last decade, so that no office building, bank, malthouse, and, much less, any public structure is considered at all substantial unless it is built with partitions, ceilings and roof of hollow tile, and all iron construction securely covered by different forms of the same material.

At Ottawa, Illinois, on the Illinois river, the Pioneer Fireproof Construction Company erected their works, in 1880, and it is there that a large percentage of all the fireproof material manufactured in the United States is made. The works are so extensive, the machinery so perfect and the clay so accessible, that recently when the company were fireproofing the Indiana state house at Indianapolis, probably the largest example of fireproof work ever accomplished, the facilities of the works were not noticeably taxed, though the material for fireproofing many buildings but a small degree less in size was being turned out at the same time. But every architect is more or less posted as to these facts, though no thoroughly realizing sense of the magnitude of the fireproofing done can be attained short of a visit to these works. The superior quality and the accessible location of the immense clay beds lead the enterprising manager of the Pioneer Fireproof Construction Company, Mr. E. V. Johnson, to investigate farther the advisability of utilizing them farther. After repeated experiments it was found that here was to be found the finest fireclay for the manufacture of firebrick the country could produce, and here opened a new vista for manufacturing improvement. Not wishing to hamper an already established and rapidly growing business with the details consequent upon the construction and operation of an entirely new plant, a company was formed with Mr. Johnson at its head, for the purpose of first manufacturing firebrick and paving tile, with possibilities for other manufactures in the future. The acres of ground covered by the sometime largest starch works in the country, now through mismanagement or loss of trade, fallen into decay, the miles of shafting, the costly machinery and the substantial buildings standing idle, attracted the company's attention. The works were bought, and what will be a mammoth clay works was established. Procuring the best firebrick machinery to be found, the work of bringing the clay to the factory was considered. The necessary permit being granted by the city, to whose benefit this new industry would largely revolve, the company proceeded to lay a mile of railway from a large tract of clay to the works. The opening of this railway will formally occur in the near future, when the leading architects of Chicago and the West will be taken by special train to participate in the exercises and aid the City of Ottawa to rejoice in its new pioneer of prosperity.

The new works will start with a capacity for fifty thousand firebrick a day, and this capacity will be increased as trade demands. The clay beds of the company cover fifteen hundred acres, through which runs a 12-foot vein of the finest fireclay, and this inexhaustible supply, coupled with the superb facilities enjoyed, will soon call for a largely increased capacity. The manufacture of a vitrified paving block is also one of the manufactures in which this company will engage, and as this kind of paving has been tried and found to work equal to granite blocks, the development of this branch may also be looked upon with a degree of certainty. The *Ottawa Journal* says:

Mr. Johnson, the projector of this enterprise, has associated with him Messrs. A. T. Griffin and F. W. Moulton, of the Pioneer Fireproof Construction Company. The name of the new company has not been decided upon yet. Johnson is a young man with a heap of enterprise and public spirit; he is an enthusiast in the matter of Ottawa's natural advantages, and confidently believes that in the next ten years the population of the city will double. Last year Mr. Johnson traveled sixty thousand miles, and says that in all his travel he did not find a city with one-half the facilities for growing and inaugurating a boom than has Ottawa. Back of this new enterprise is ample capital, and with its completion we may reasonably look for the others to follow. It looks like the dawning of a new era, the setting in of a boom.

There is no doubt but that the possibilities for the Pioneer Fireproof Construction Company and the company newly organized are at present beyond computation, and as every new demand in construction is met by the inventive genius and enterprise of the manager of the concern, so will the demand for the different forms of firebrick and paving tile be fully

supplied. Not only this, but the public may look for other products from those vast clay fields, that stretch out along the picturesque river, the center of the most beautiful of Illinois scenery.

A new building material is not impossible, cheaper than pressed brick, but as capable of architectural design and construction. When the swift but certain destruction of the vast pine forests that have furnished the homes for the people in the past has reached a limit where a material cheaper and more durable than wood is looked for, the Pioneer Company will be prepared to offer a substitute that will not only come into general use, but cause builders to wonder why it was not adopted long before.

These remarks should not close without again calling the attention of architects to the pleasure and instruction to be gained by a trip to these extensive works for the manufacture of clay products.

Wolff's Transparent Paints.

WOLFF & RANDOLPH, of Philadelphia, have sent us a catalogue of their transparent paints, and we do them but meager justice when we say that it excels all compilations for a similar purpose, that we have yet seen. The title of the book precludes all questions as to what its purpose might be, i.e., to advertise their paints (which are very handsome), and the ingenious manner in which this has been accomplished is remarkable.

In the introduction, the reader's attention is called to the fact that the natural color of the wood is an important factor in the appearance of the paint; that is, that a color used on walnut, will not have the same appearance if used on pine. To illustrate this more effectively, the paints are shown on pine, birch, maple, chestnut, oak, walnut, and other veneers. Not mere representations of the wood, but the wood itself.

We can easily imagine what a vast amount of time, labor, and money has been expended in the production of such a novel and handsome work, and also readily see that a copy will be of benefit to every wood-worker. We refer to their advertisement on page

Mosaics.

ARCHITECT M. D. Makepeace, of Auburn, New York, writes: "Please state in your next issue that I wish to obtain Vols. I to IV of THE INLAND ARCHITECT AND BUILDER. Parties desiring to dispose of same to state price on addressing me."

ACCORDING to a correspondent the following is the only mathematical paradox: Let $a = b$. Involving the equation, multiply by a , and it becomes $a^2 = a \cdot b$. Now, subtracting b^2 , we derive $a^2 - b^2 = a \cdot b - b^2$. And again, dividing by $a - b$, we find that $a + b = a$. Therefore, by substitution of numerical values, $2 = 1$. Q. N. E. D.

INTELLIGENT people who are familiar with the respective advantages which are offered by the several competing railroad lines between Chicago, St. Louis and Kansas City, and who desire to travel with the utmost speed, safety and comfort, always take the popular and reliable Chicago & Alton railroad between these points, and passengers going to or coming from the South via St. Louis, or when going to or coming from the West via Kansas City, should insist upon having tickets that read over the Chicago & Alton. It is the only road with two complete and elegantly equipped dining trains daily between Chicago and each of the points named, and no railroad managers in America have a more intelligent appreciation of the wants of the traveling public than do those of the famous C. & A.

MESSRS. MERCHANT & Co., the well-known tin-plate manufacturers and dealers, in a recent advertisement in an exchange, quote the following from the *American Grocer*: "The larger part of our merchants, we believe, are honest in all things pertaining to their commercial life from principle; many are so for policy's sake. A troublesome minority are those who think any means to an end correct so long as they evade responsibility. A competitor who trespasses on the rights of another, stealing the results of his labor, is a sort of trade highwayman, bold, dangerous and possessed of unlimited cheek, which he is apt to call courage. To the honest merchant the competition of such men is very annoying, if not exasperating. Often they are driven to a point where they feel they must succumb or else change base and fight to win without regard to moral obligations."

ON the nineteenth of last September, according to the *Gazette des Architectes et du Batiment*, the American residents of Paris inaugurated their new temple of the church of the Holy Trinity. The church is situated in the fashionable quarter of the Champs-Elysses, and fronts one hundred and fifty-three feet on the avenue of Alma. The construction is in the gothic style in stone and marble. The façade is simple. On one side the entrance of carved wood, in the center a splendid stained glass window represents the verses of the "Te Deum;" on the other side is the tower, to which the steeple has not yet been added. The interior of the church is divided into three aisles by columns of granite. The sanctuary is divided from the principal aisle by a grating of brass and iron, the altar is of black marble, covered with old embroidery work and surmounted with a cross in vermeil, incrusting with rock crystals. This cross dates from the fifteenth century. The pulpit is of white marble, with rich carving of leaves, the bishop's seat is of English stone. The baptismal fonts are of the same material, with marble pedestals. On the minister's desk is placed a Bible, the binding of which is of old silver artistically worked. The various pews around the altar are magnificent works of the carver's hand. In the entrance is to be noted the contribution-box. This box is of iron, and was purchased at a sale of a German monastery, and for more than four hundred years the faithful have deposited their alms in its care. The organ of the church is not yet in place. It will be a superb instrument, and will cost \$10,000. We must also mention the twelve magnificent stained glass windows, the gift of American residents, in fact, the various articles

of value we have mentioned have all been donated. The cost of the building has been several millions of francs, and has been erected by Architects Street & Son, of London. The first stone was laid on the 4th of March, 1881, by the Rev. A. N. Littlejohn, Bishop, of Providence, Rhode Island.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, ILL., December 1, 1886.

The building authorities east and west seem to unite in saying that this year has been a better one than last in building interests. The assertion is a safe one to make. The increase in investments will average about twenty per cent. Statements of this kind are largely guess-work. We have no building statistics from the hands of smaller cities, towns and hamlets throughout the country, and it is not safe to average building operations throughout the state by those of its leading cities. New York, Philadelphia and Chicago are fully twenty per cent ahead in their operations this year over last; Boston, Cincinnati and St. Louis will run not less than fifteen per cent. Cities like Toledo, Albany, Kansas City, and cities running in population down to 20,000, show a very encouraging condition in regard to their industrial and building operations. Building material has been light throughout this season and regular in prices. Brick, lumber, iron, steel, hardware, glass, etc., have shown very little change since the opening of the season. Labor was the only uncertain factor and that was speedily fixed. That which most concerns us now is the probabilities as to the future. All architects and builders agree that unusual activity will prevail in building operations during the winter. Architects have some very heavy work in hand both in eastern and western cities. A stronger indication is to be found in the encouraging activity in real estate. Advances from all the leading cities show that a great deal of real estate is changing hands for building purposes. Investors in the larger cities are picking up building plots and lots, intending to erect on them residences of greater or lesser cost to sell or rent. All of the leading industries are in excellent health. Beginning with railroad building we find that our construction this year will be about double that of last year when the season closes. Already the rail makers have sold rails enough to lay no less than 7,000 miles of road. The producing capacity will make about 15,000 miles all told including repairs. This points to about 7,500 miles as next year's railroad construction of main track. We find a great deal of activity among car builders. The locomotive makers have been booking large orders during the past few weeks. The smaller shops are all crowded with business. In commercial circles the same favorable reports are made from cities as far east as Boston, and from the farthest western distributing points. Manufacturers throughout New England and middle states are engaged in the production of spring supplies, and traveling salesmen are now scattered over the country taking orders from four to six months ahead of deliveries. The money markets are in good shape. The demand prevents any great accumulation at financial centers. It is fortunate for western borrowers that better facilities have been established of late for the lending and borrowing of money upon individual security. Farmers, mechanics, manufacturers and other small borrowers, who heretofore have been obliged to pay twelve to fifteen per cent and in fact frequently much more, are now able to obtain money at half those rates. This outflow of money from the East will continue. It may well be doubted whether a financial system which keeps one large wealth-producing section of the country constantly borrowing from the mere handlers of money is a sound system, but practical men have to do only with the fact that interests are crowding them to be borrowers and they have reason to congratulate themselves that the taxation is on the down grade.

We look forward to 1887 with more confidence than we looked forward to 1886 a year ago. The enormous railroad construction throughout the West and Northwest is the most important factor and promises the most excellent results. The building up of the Northwest will strengthen enterprise and labor. The opportunities for enterprise have never yet been measured and despite all the allurements which capital finds in the South it yet leaves a self-evident fact that the energetic and enterprising channels of activity find in the Northwest the strongest permanent investments. Our leading architects have knowledge of heavy investments in the way of shop and mill construction, manufacturing enterprises will push their way with greater force next year because of the more satisfactory returns realized during the past few months. The wider margins are drawing more money into the productive channels. The architects and the builders are the first to feel the improvement and they are already preparing for the busiest year they have ever had. The iron and steel makers will advance prices for several products likely but not sufficient to alarm enterprise. No speculative values are possible. The strength of the times is in legitimate values. The productive capacity will be increased fast enough to take care of builders and manufacturers and investing interests. The lumber market shows great strength, but the supply will in all probability be sufficient to meet their requirement without more than a legitimate advance. The improvement which lumber manufacturers anticipate is the legitimate one to which they are fully entitled.

Synopsis of Building News.

Areola, Ill.—Architect Geo. P. Washburn, of Ottawa, Kansas, reports: For P. M. Moor, frame dwelling, 30 by 55 feet; cost \$2,500; under way.

Auburn, Ill.—Architect Fred Keltienich reports: For the Weber Wagon Company, addition to factory, three stories, 66 by 212 feet, common brick; cost \$20,000.

Buffalo, N. Y.—Architects R. A. & L. Bethune: For Mrs. Collignon, a residence on Ellicott street; cost \$6,000. For Abner Cutler, residence on Jewell avenue; cost \$4,000. For School Board, public school building No. 31, on Oneida street; cost \$30,000; M. McNamara and John Feist, builders. For Carl Lautz, residence on Dodge street; cost \$4,000; E. M. Hager, builder. For Wm. Lautz, residence on Dodge street; cost \$4,000; E. M. Hager, builder.

Architect W. W. Carlin: For Edward W. Evans, brick store building, on Seneca street; cost \$12,000; Chas. Berrick, builder.

Architect H. H. Little: For City of Buffalo, public morgue on the Terrace; cost \$6,000; John Druar, builder.

Chicago, Ill.—Architects Adler & Sullivan: For L. A. Eliel, two-story stone front residence, 25 by 65 feet, at 3538 Ellis avenue; cost \$10,000; under way; V. Falkenan, mason; Hunt & Thom, carpenters. For E. G. Pauling, three-story flats, 20 by 74 feet, at 30 Scott street, Indiana pressed brick; cost \$10,000; under way; V. Falkenan, mason; L. Seeman, carpenter.

Architect L. B. Dixon: For Henry Corwith, two three-story stores and flats, 52 by 95 feet, 552-554 West Madison street, St. Louis pressed brick, terra-cotta and brownstone trimmings; cost \$28,000; under way; J. Angus, mason; A. White, carpenter.

Architect W. H. Drake: For Wm. Kasper, four-story stores and flats, 82 by 96 feet, Blue Island avenue and Nineteenth street, rock-faced stone front; cost \$20,000.

Architect G. Isaacson: For F. T. Hills, two-story stone and frame dwelling, 28 by 45 feet, in Hyde Park; cost \$5,000. For P. F. Munger, two-story stone and frame dwelling, 32 by 63 feet, in Hyde Park; cost \$12,000.

Architect H. F. Starbuck: For J. S. Belden, three three-story stores and flats, 60 by 80 feet, on Forty-third street, Anderson pressed brick, Lemont stone; cost \$12,000; under way.

Architect John Otter: For Mr. Kennelly, three-story stores and flats, 29 by 75 feet, corner of Huron and Sedgwick streets, Anderson pressed brick; cost \$8,000.

Architect H. R. Wilson: For himself, two two-story dwellings, 40 by 70 feet, on South Park avenue, brownstone fronts; cost \$16,000; under way; Geo. Lehman & Son, masons.

Architect H. Boyington: For J. W. Cochrane, two-story store and flats, 27 by 147 feet, on State, near Thirty-ninth street, pressed brick and stone; cost \$8,000; under way; J. J. Rogan, mason.

Architect C. A. Weary: For O. L. Himkins, two-story dwelling, 20 by 50 feet, on Seymour street; cost \$4,000; under way; Wm. Lett, mason; C. J. McGee, carpenter.

Architect J. L. Silsbee: For Dr. E. C. Dudley, two-story dwelling, 24 by 50 feet, 1619 Indiana avenue; cost \$12,000; John Mountain, mason; P. Jensen, carpenter.

Architect G. Thiel: For E. Hogenson, four-story stores and flats, 91 by 91 feet; cost \$12,000; J. Rassmussen, mason; P. Pogenson, carpenter. For F. Klimmer, two-story store, 20 by 30 feet; cost \$3,500. For B. Ewert, three-story dwelling, 24 by 50 feet, at 424 Huron street, Indiana pressed brick, Lemont stone; cost \$4,000. For O. Kouewsky, two-story store and flats, on Clybourn avenue; cost \$5,000.

Architects Cobb & Frost: For P. H. Smith, two-story residence, 25 by 72 feet, at 106 Astor street, pressed brick and stone; cost \$20,000; under way; Louis Weick, mason.

Architect H. Boehme, of Joliet, reports: For C., R. I. & P. R. R. depot at Fifty-fifth street; cost \$2,500; under way; E. Lond, builder.

Architects Sprague & Newell: For N. F. Nickerson, two three-story stores and flats, 40 by 82 feet, corner Thirty-ninth street and Cottage Grove avenue, Indiana pressed brick, brownstone trimmings; cost \$15,000; under way; John Griffiths, mason; Wm. Goldie & Son, carpenters. For O. Burdick, five two-story dwellings, 100 by 60 feet, on Oakwood avenue, brownstone and white brick; cost \$20,000. For W. H. Mosher, four two-story dwellings, 78 by 40 feet, on West Jackson street, brick and Lemont stone; cost \$10,000; under way; T. C. Homan, mason; W. Collins, carpenter.

Architect W. H. Adams: For Barnard & Calkins, three-story dwelling, 20 by 70 feet, 3213 Groveland Park avenue, pressed brick, stone and terra-cotta; cost \$10,000; under way; Geo. Lehman & Son, builders.

Architect J. H. Carpenter: For J. Kramer, four two-story dwellings on Robey street near Adams, rock-faced stone fronts; \$14,000.

Architects Flanders & Zimmerman: For J. B. Mallers, two two-story dwellings, 40 by 50 feet, 32-34 Groveland Park avenue, brownstone fronts; cost \$18,000; under way; day work.

Architect W. Ohlhaber: For Theo. Schulze, four-story store and flats, 24 by 80 feet, corner of Division and Robey streets, St. Louis pressed brick and terra-cotta; cost \$11,000.

Architects Miller & Thaler: For P. D. O'Neil, three-story store and flats, 30 by 100 feet, 683 West Lake street, Anderson pressed brick; cost \$10,000.

Architect R. G. Pentecost: For Henry Sweet, three-story stores and flats, corner Wentworth avenue and Twenty-second street, Anderson pressed brick; cost \$75,000; under way.

Architect J. F. Doerr: For Jacob Schneider, three-story store and flats, 24 by 76 feet, Indiana pressed brick, Lemont stone; cost \$7,000; under way; F. Happe, mason; Ruetner Bros., carpenters.

Architect H. Rehwaldt: For B. Harris, two three-story stores and flats, 50 by 55 feet, 315-317 West Lake street, pressed brick and stone; cost \$8,000; A. Holpuch, mason; Peter Welter, carpenter.

Girard, Kan.—On November 22, the Presbyterian Church was completely wrecked by cyclone.

Chippewa Falls, Minn.—Architects Willcox & Johnston, of St. Paul, report: For School Board, brick and stone school house, 42 by 60 feet; cost \$28,000; under way.

Eau Claire, Wis.—Architects Willcox & Johnston, of St. Paul, Minnesota, report: For First Congregational Society, stone church building, 75 by 120 feet, seating capacity 600 persons; cost \$32,000; under way.

El Dorado, Kan.—Architects Hadley & Cooper, of Topeka, report: For the city, three-story city building, 47 by 80 feet, stone, tin shingle roof; cost \$10,000; plans under way.

Faribault, Minn.—Architects Willcox & Johnston, of St. Paul, report: For Shattuck School, Shumway Hall building, 40 by 160 feet, built of stone; cost \$60,000; under way.

Fort Smith, Ark.—A \$50,000 jail building is to be erected here; J. H. Reid, superintendent. Architect J. S. Skidmore has prepared plans for a \$6,000 church building to be erected here.

Fort Wayne, Ind.—Architect H. W. Matson reports: For Keller Medicine Co., two-story brick store building, 40 by 85 feet, stone trimmings; cost \$5,000; under way; Jacob Baites, builder. For S. Bard, two three-story stores, 40 by 75 feet, brick and stone, galvanized trimmings; cost \$6,000; under way; John Surler and Henry Hesemeier, builders. For Frederick Roth, two-story and cellar double brick dwelling, 46 by 62 feet, stone trimmings, slate roof; cost \$6,000; projected. For Henry Keller, brick dwelling, 30 by 52 feet; cost \$2,000; under way; Fred Brandt, builder. For B. L. Post, two-story brick store building, 24 by 60 feet; cost \$3,000; projected. For Henry Schone, brick residence, 28 by 60 feet; cost \$2,500; under way; Wm. Hilgemann and Miller & Schall, builders.

Goshen, Ind.—The English Lutheran Church (Cass Chapman of Chicago, Ill., architect, J. N. Barnett, pastor) is rapidly approaching completion. Plastering is being done, and spire erecting. Building is 38 by 70 feet, built of brick. Contracts include stained glass, hot-air heat, opera or assembly chairs, frescoing, bell, pulpit, and pulpit chairs, altar (table), curtains and rods, carpet, etc.; M. F. Isbell, superintendent.

Hamilton, Ohio.—Architect Max Reutti reports: For C. & P. Benninghoffen, two-story brick livery stable, 50 by 182 feet, galvanized iron cornice, tin roof; cost \$7,000; under way. For John Kreighenhoffen, two-story frame dwelling; cost \$600; projected.

Junction City, Kan.—Architects Hadley & Cooper report: For School Board, two-story brick school house, 48 by 55 feet, tin shingle roof, galvanized iron cornice; cost \$8,000; under way.

Kinsman, Ohio.—Architects Kanengeiser & Kling, of Youngstown, report: Plans prepared for Joseph McGranahan for a two-story stone and frame residence, 65 by 80 feet, slate roof, hardwood finish, wood mantels, steam heat, dumb waiters, electric bells, speaking tubes, closets, bath, stained glass, etc. Also a frame stable; to be commenced early in the spring. Bids being received.

Laurens, Co., Neb.—Architects Willcox & Johnston, of St. Paul, Minn., report: For Hon. W. H. Stout, stone residence, to cost \$100,000; under way.

Larned, Kan.—Architects W. R. Parsons & Son, who reported the Opera House building in our last issue, are located at Topeka instead of Emporia, as we stated in the report.

Lincoln, Neb.—Architects Willcox & Johnston, of St. Paul, Minn., report: St. Paul M. E. Church, stone building, 85 by 150 feet; seating capacity, 2,000 persons; cost \$35,000; just completed. For the University, brick and stone chemical laboratory, 40 by 120 feet; cost \$33,000; just finished.

Louisville, Ky.—Architects McDonald Bros. report: For Third English Lutheran Society, brick and terra-cotta church building, 76 by 85 feet; cost \$15,600; projected. For Z. T. Carsons, brick and terra-cotta dwelling; cost \$6,500; projected. For S. I. Force, tobacco factory; cost \$12,000; under way; John Wise, builder. For Spirit Cure Tobacco Co., tobacco factory; cost \$4,000; under way; E. Harris, builder.

Mankato, Kan.—Architects Hadley & Cooper, of Topeka, report: For Jewell County, two-story court house, 62 by 100 feet, brick, stone trimmings, tin shingle roof; cost \$25,000; plans finished; contracts not let.

Minneapolis, Minn.—Architect Warren H. Hayes reports: Present condition and outlook for building exceedingly good. For First Presbyterian Society, church building, 145 by 98 feet, auditorium, one story, seating capacity, 800 persons, besides 300 in gallery; Sunday school department, two-stories and finished basement for toilet rooms, kitchen, dining rooms, etc., being built of granite and brownstone from Lake Superior, slate, and galvanized iron, antique oak finish; cost \$55,000; under way; Geo. Summers, general contractor for the whole work.

An architect, who fails to give his name, reports: For Walter F. Stetson, three-story brick, 23 by 57 feet; cost \$4,500; under way. For E. J. Phelps, three-story double tenement house, 41 by 57 feet, brick; cost \$10,000; under way; D. Dinsmore & Son, builders.

Newport, Minn.—Architects Willcox & Johnston, of St. Paul, report: For Hon. H. C. James, frame residence; cost \$6,000; under way.

New Corporations.—The Lockport Stone Company, at Chicago; capital stock, \$40,000; incorporators, Walter J. Fiddymont, John C. Fiddymont, and August J. Knox. The Etna Iron Works, at Chicago; capital stock, \$50,000; incorporators, John I. Pfau, Frank C. Miller, and P. M. Pfau. The Meyenberg Brick Company, Chicago; \$500,000, capital stock; W. S. Abbott, F. P. Meyenberg, and George W. Cass, incorporators. The Holbrook & Mann Sanitary Exhaust Ventilating and Heating Company, Chicago; capital stock, \$300,000; incorporators, Henry N. Mann, Benjamin Holbrook, and Hardin J. Burlingame.

North Springfield, Mo.—Architect S. B. Abbott reports: Business fair. For Second Presbyterian Church, chapel, 50 by 32 feet, with porch entrance and vestibule, 16 by 16 feet, to be built of stone, rustic corners, cutstone corbels, stained glass windows, etc.; cost \$4,500; under way; Rundall Bros., masons; Chas. George, carpenter. For E. L. Fay, alterations, etc., to residence; cost \$2,500; D. E. Davis, contractor.

Ottawa, Kan.—Architect Geo. P. Washburn reports: Work is closing up for this season; prospects for 1887 are good. For First Baptist Congregation, two-story church building, main building 70 by 70 feet, chapel 50 by 75 feet, to be built of stone, slate roof, galvanized iron cornices; cost \$30,000; under way; L. R. Crawford, builder. For United Presbyterians, one-story frame, 40 by 64 feet; cost \$3,500; under way; Hunt & Demar, builders. For J. Jeffries, two-story and basement stone business block, 76 by 60 feet; cost \$10,000; under way; day work. For E. H. Becker, frame cottage, 36 by 56 feet; cost \$3,000; under way; Williams & Scott, builders. For A. R. Hamilton, frame cottage, 36 by 60 feet; cost \$3,200; under way; Williams & Scott, builders. For J. E. Baer, two-story frame cottage, 26 by 32 feet; cost \$2,100; under way. For Franklin county, poorhouse, two-story stone building, 42 by 74 feet; cost \$9,000; under way; day work. For School District No. 35 near Ottawa, frame school house, 24 by 32 feet; cost \$1,500; projected; also a number of smaller buildings.

Paducah, Ky.—Architect Oscar S. Teale, of New York City has prepared plans for a stock company for a four-story hotel building, 162 by 108 feet, to be located at the corner of Broadway and Chestnut streets, brick, stone trimmings, iron channels, beams, etc., hardwood finish, tiling and wood mantels, passenger and freight elevators, dumb waiters, electric bells, closets, bath, stained glass, etc., water power; question of electric lighting not yet settled; complete hotel kitchen and laundry outfits; special ventilating features to lavatories; cost of building complete \$75,000; contracts not yet let.

Paolo, Kan.—Architect Geo. P. Washburn, of Ottawa, reports: For J. F. Merrill, two-story frame dwelling, 38 by 54 feet; cost \$4,000; under way. For S. W. Davis, brick opera house building, 50 by 100 feet; cost \$9,000; under way. For E. W. Robinson, frame dwelling, 26 by 54 feet; cost \$2,200; under way.

Pueblo, Colo.—Architects Hadley & Cooper, of Topeka, Kan., report: Preparing plans for a stone church building, slate roof; cost \$5,000.

Russell, Kan.—Architects Hadley & Cooper, of Topeka, report: For School Board, two two-story stone school houses, 26 by 57 and 65 by 73 feet; cost, respectively, \$4,500, and \$12,000; plans not yet completed.

San Diego, Cal.—Architects Willcox & Johnston, of St. Paul, Minn., report: For Episcopal Society, frame church building, 60 by 86 feet; cost \$12,000; under way. For Hon. Geo. Puterbaugh, frame residence; cost \$7,000; under way. For Rev. H. B. Restack, frame dwelling; cost \$3,200; under way.

Sank Rapids, Minn.—Architects Willcox & Johnston, of St. Paul, report: For Grace Episcopal Society, frame church building, 26 by 70 feet, seating capacity, 250 persons; cost \$3,000; under way.

Sault Ste Marie, Mich.—The First National Bank propose to erect a two or three-story bank building, 71 by 100 feet, of brick and stone, to cost \$20,000. In connection with it the president says, the building will be commenced as soon as spring opens. Have not yet secured the architect. In regard to material, we have a local quarry of limestone, which we may use; if not, will use Chicago pressed brick.

St. Louis, Mo.—Architect Fred W. Folk reports: For Mrs. M. Cecil, two-story and mansard slate and gravel roof dwelling, 21 by 60 feet; cost \$5,000; under way; J. H. Gray & Bro., builders. For Geo. Bannerhoff, two-story, stock brick, cutstone trimmings, 22 by 71 feet; cost \$3,500; projected; outlook for spring, good.

St. Paul, Minn.—Architects Willcox & Johnston report: For St. Mary's Church at Merriam Park, frame building, 35 by 66 feet; cost \$3,500; under way. For Macalaster College, brick and stone wing to College building, 100 by 320 feet; cost \$75,000; under way. For Dr. Abbott, two brick and stone residences, 42 by 60 feet; cost \$16,000; under way. For T. B. Campbell, frame residence; cost \$9,000; under way. For R. R. Dorr, stone and brick residence; cost \$20,000; under way. For J. J. Macdonald, frame residence; cost \$4,000; under way. For Mrs. W. V. Otis, frame residence; cost \$14,000; under way. For T. Schurmeier, stone residence; cost \$30,000; under way. For A. H. Wilder, stone and brick residence; cost \$75,000; under way. For H. Stevens, frame residence; cost \$10,500; under way. For Bank of Minnesota, fireproof stone building; cost \$200,000; under way. For Frederick Driscoll, brick and stone residence; cost \$34,500; under way. For Mrs. Casey, two three-story brick and stone store buildings, 50 by 50 feet; cost \$12,000; under way. For E. F. Skidmore, four four-story brick and stone store buildings, 50 by 80 feet; cost \$20,000; under way. For C. S. Thurston, four-story brick warehouse, 56 by 90 feet; cost \$16,000; under way. For Holland & Thompson, two-story warehouse, 40 by 80 feet; cost \$8,000. For Bruns Beaupre, alterations in residence; cost \$3,000; under way. For E. H. Cutter, alterations in residence; cost \$9,000. For J. J. Odell, alterations in residence; cost \$2,500; under way. For E. W. Winter, alterations in residence; cost \$4,500; under way.

Teemuseh, Shawnee Co., Kan.—Architects Hadley & Collins, of Topeka, report: Two-story stone school house, 27 by 57 feet; cost \$4,500; under way; T. H. Parker, builder. For District 91, Shawnee county, two-story frame school house, 26 by 56 feet; cost \$3,250; under way; J. W. Chamberlain, builder. For District 22, Shawnee county, one-story frame school house, 45 by 67 feet; cost \$2,283; R. Scheloske, builder.

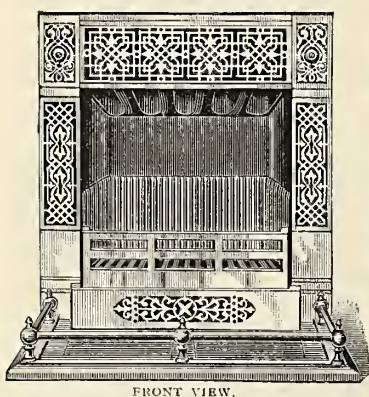
Texarkana, Ark.—J. F. Smith & Co. will erect a three-story brick hotel.

Topeka, Kan.—Architects Hadley & Cooper report: The outlook is good; have considerable work on hand and still more coming in. For D. Shelton, two-story frame, colonial style, 35 by 44 feet; cost \$3,500; under way; J. W. Chamberlain, builder. For J. H. Dennis, two-story frame dwelling, 22 by 40 feet; cost \$3,000; plans in preparation; also work in other places, reported elsewhere in this issue.

Wawaka, Ind.—Architect H. W. Matson, of Ft. Wayne, reports: For School Board, two-story and cellar school building, 46 by 60 feet, brick and stone, slate roof, furnace heat; cost \$7,000; bids to be opened December 16, at Wawaka.

Winona, Minn.—Architects Willcox & Johnston, of St. Paul, report: For M. G. Norton, brick and stone residence; cost \$30,000; under way. For Hon. Thomas Wilson, frame residence; cost \$15,000; under way.

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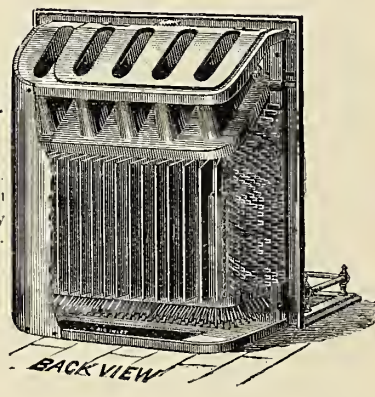
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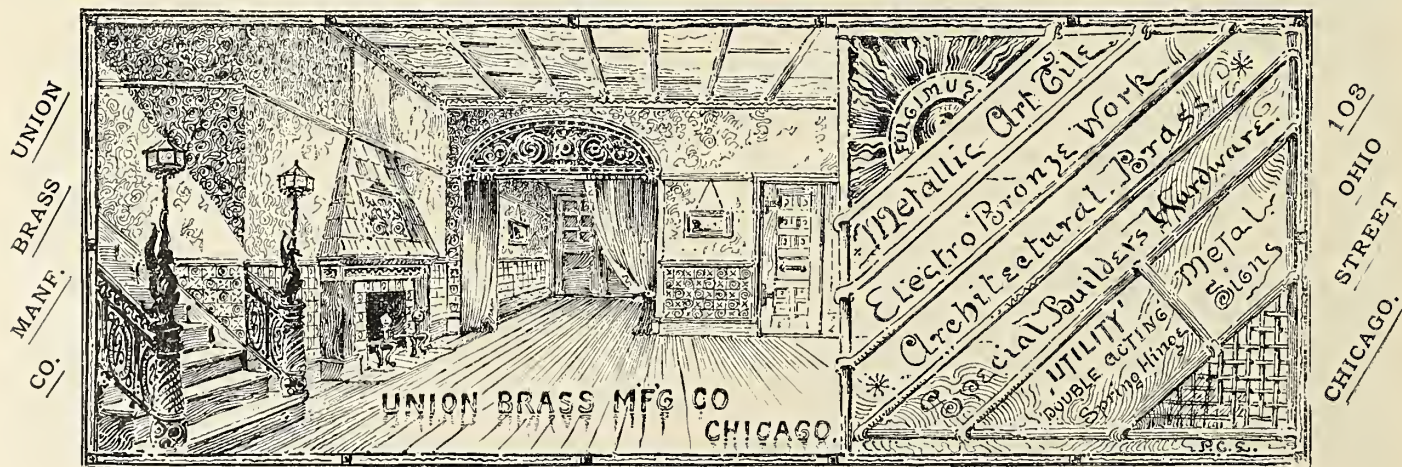
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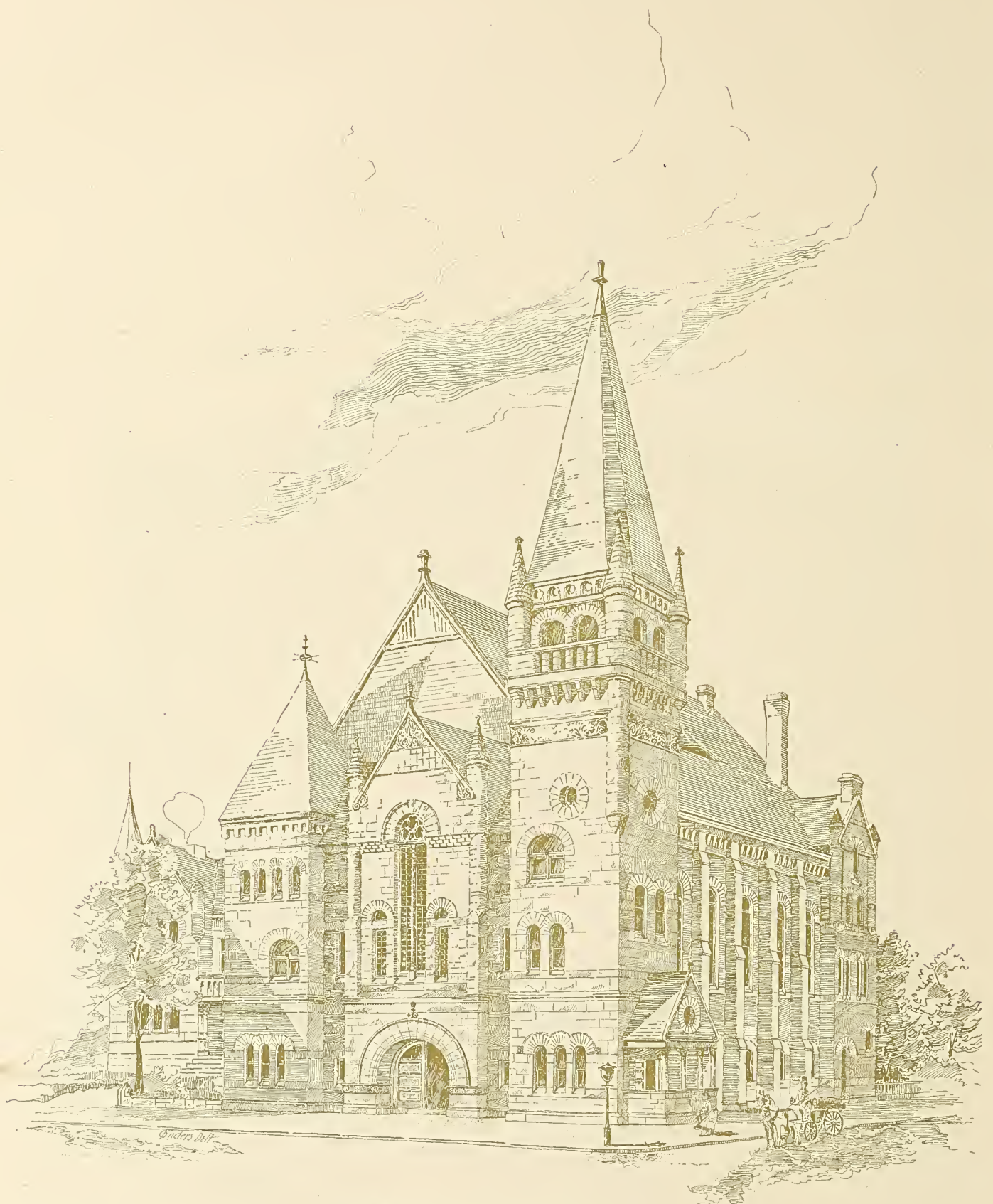
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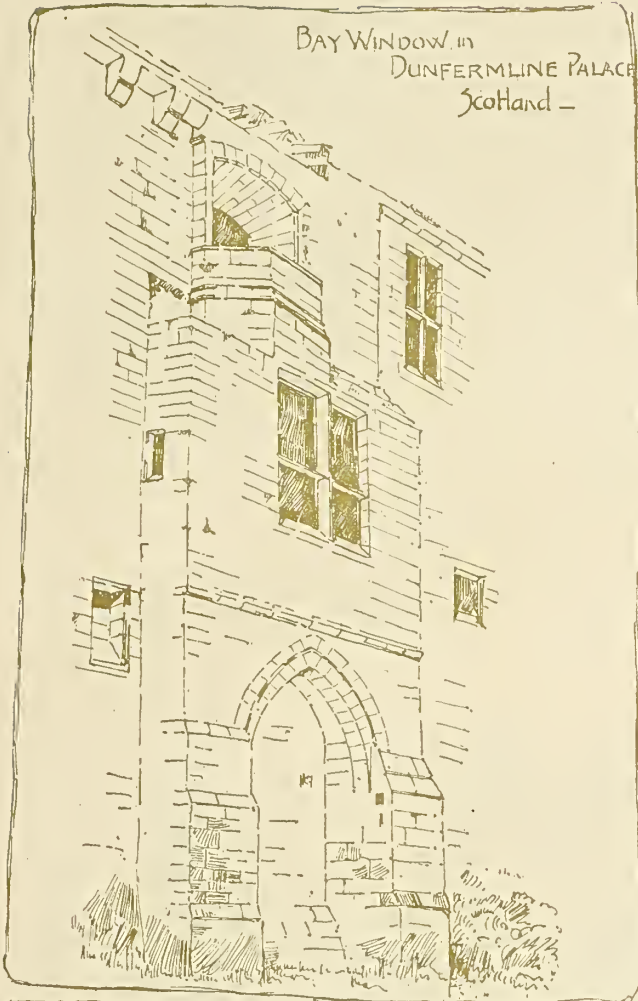
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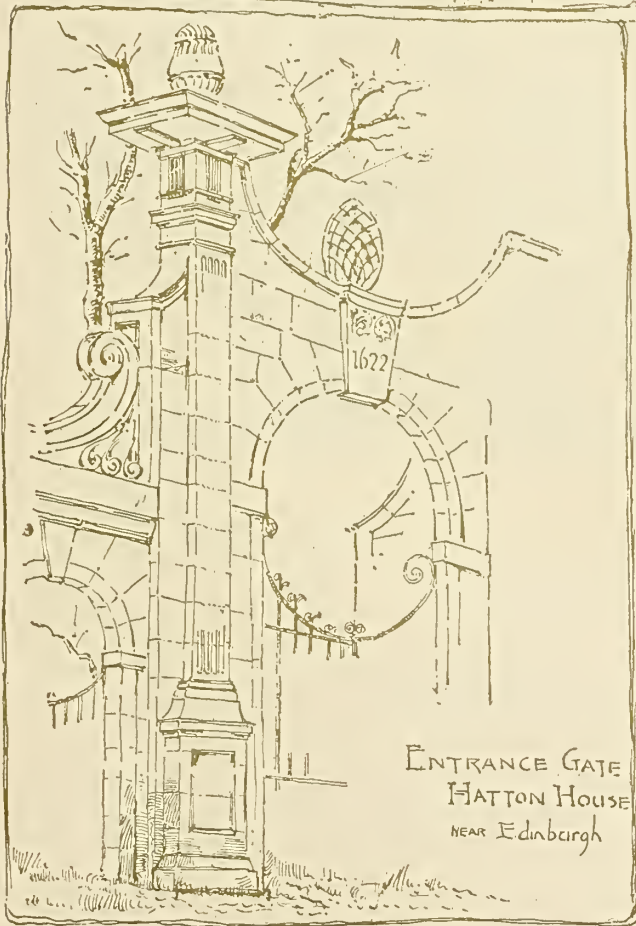


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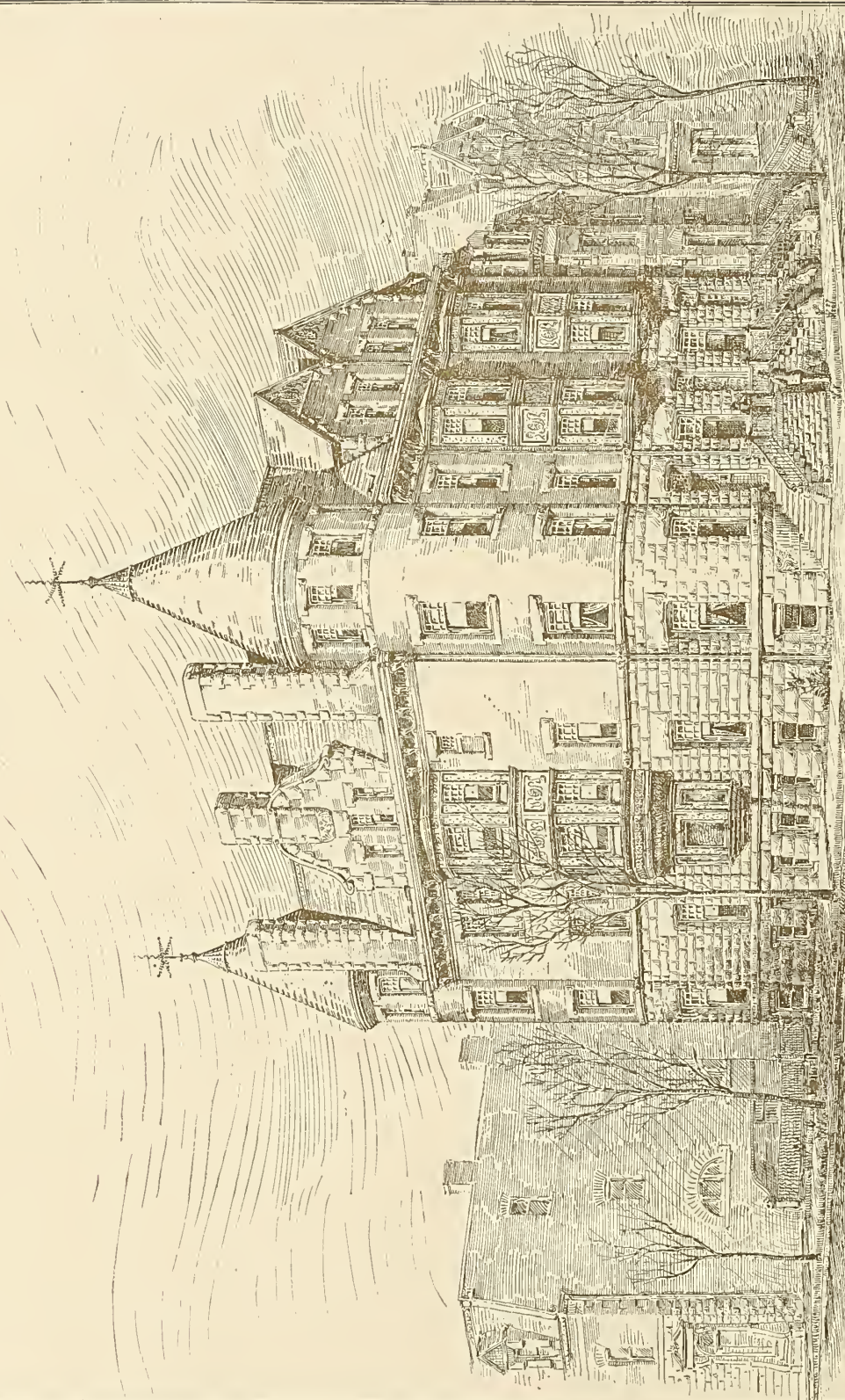




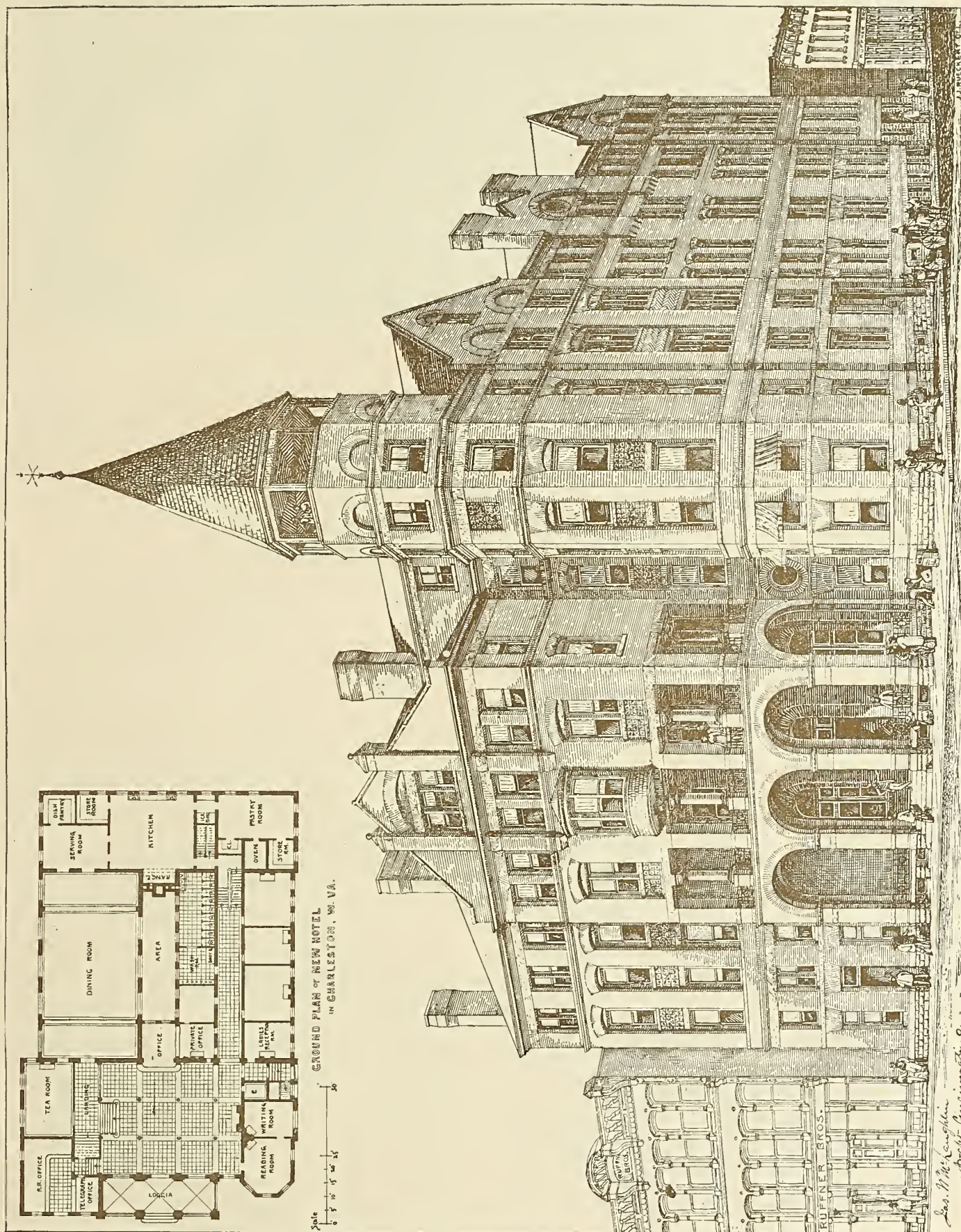
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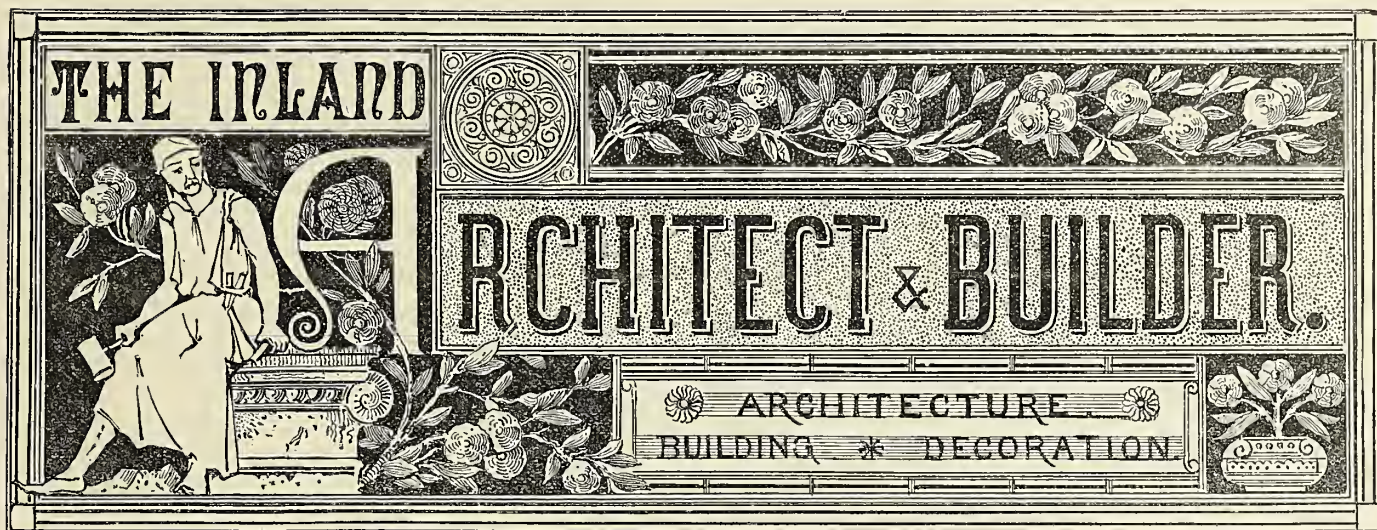
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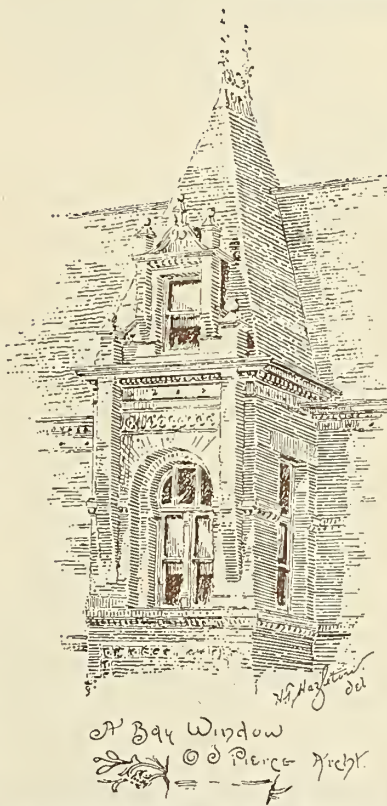
THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

WE publish in this issue the complete, verbatim report of the debate upon the Sanitary bill now before the Illinois State Association, also reprinting the entire bill so that each member can be fully prepared to intelligently discuss it at the next regular meeting, January 8. It will be the special order of business, and the meeting will be attended by committees from the Master Plumbers and Master Sewer-builders' Associations. Members of the city health, building, and sewerage departments are also invited to be present.

THE delegates representing the Western Association of Architects at the annual convention of the American Institute, were John W. Root, of Chicago, and Sidney Smith, of Omaha. En route for New York, these gentlemen were entertained handsomely by the Buffalo Society of Architects. In New York their reception by the members of the institute was hearty, and a most cordial feeling was manifest toward the association they were sent to represent. The fact that the Western Association had selected this committee from their most honored members was recognized. Mr. Root, as president of the association, and Mr. Smith for two terms a member of its board of directors (and a candidate for the office of president at the last convention, withdrawing in favor of Mr. Root), as well as a member in honorable standing for more than two decades of the Royal Institute of British Architects, gave an additional evidence of the fraternal feeling existing in the Western Association for the American Institute. This, the institute heartily seconded in the many courtesies extended the visitors.

Twentieth Annual Convention American Institute of Architects.



THE twentieth annual meeting of the Institute was held in New York on the first, second and third instants, being the first meeting of that body held in New York City for seven years.

The convention was held in the directors' room of the New York Mutual Life Insurance building, President Thomas U. Walter, of Philadelphia, in the chair.

An unusually large number of representative members were present, including the following: Thomas U. Walter, Philadelphia; Alfred Stone, Providence, R. I.; Stephen C. Earle, Worcester, Mass.; Warren R. Briggs, Bridgeport, Ct.; L. W. Robinson, New Haven, Ct.; Jas. G. Cutter, Rochester, N. Y.; E. I. Nickerson, Providence, R. I.; M. E. Bell, Washington, D. C.; Geo. A. Frederic, Baltimore, Md.; Sidney Smith, Omaha, Neb.; John W. Root, Chicago, Ill.; F. W. Humble, Buffalo, N. Y.; Howard Hopkin, Providence, R. I.; E. D. Evans, Pittsburgh, Pa.; Glen Brown, Washington, D. C.; John H. Gouge, Utica, N. Y.; J. Huckle, jr., Philadelphia, Pa.; E. L. Walter, Scranton, Pa.; Edward Hazlehurst, Philadelphia, Pa.; G. L. Norrman, Atlanta, Ga.; A. Echhorn, Orange, N. J.; J. O'Rourke, Newark, N. J.; C. A. Wallingford, Minneapolis, Minn.; O. P. Hatfield, E. T. Littell, A. J. Bloor, N. Le Brun, R. H. Robertson, Pierie Le Brun, De Lemos, Cordès, Prof. W. R. Ware, E. H. Kendall, G. B. Post, R. M. Hunt, H. M. Congdon, H. J. Hardenburg, C. W. Clinton, J. R. Renwick, A. Potter, R. M. Upjohn, H. O. Avery, H. H. Holly, James Ware, all of New York City; John Moser, Washington, D. C.; J. C. Sturgis, Boston, Mass.; Thomas Nolan, Rochester, N. Y.; Walter Cope, Philadelphia, Pa.; John Stewardson, Philadelphia, Pa.

The Western Association of Architects was represented by John W. Root, of Chicago, and Sidney Smith, of Omaha, members of the committee appointed for that duty.

THE INLAND ARCHITECT was represented by R. C. McLean, and was the only architectural journal represented at the convention. Mr. Henry C. Meyer, of the *Sanitary Engineer and Construction Record* was also in constant attendance.

Mr. George C. Mason, the secretary of the A.I.A., was suddenly called home, and A. J. Bloor was appointed secretary pro tem,

PRESIDENT'S ADDRESS

President Walter read the following address:

Fellows and Associates of the American Institute of Architects:

I now have the honor, gentlemen, to open the Twentieth Annual Convention of the Institute, with an address on the progress of our art, and its cognate elements, during the past year.

Architecture being a science in which "the good, the true, and the beautiful" predominate in all its relations, it is obvious that a careful study of the theory of aesthetics, or the philosophy of taste, is indispensable to a successful practice of our profession. It is also important that we promote, as far as practicable, social and fraternal relations. We shall find that the better we know each other, the better it will be for art.

While it is undoubtedly true that rivalry is the soul of progress and improvement, it is also true that rivalry does not necessarily involve professional animosities: these should be wholly unknown to those whose studies are devoted to the arts of polished life,—the ennobling and elevating character of which should carry as above all petty considerations.

Another year having elapsed since we met in annual convention, it will be proper, and perhaps interesting, to glance retrospectively at the architecture of the recent past, and to note some of the evidences of progress and improvement observable in most of the buildings now in progress, as well as in many that have recently been completed. The ornamental character, particularly of brickwork, throughout the country, has undergone changes which impart to the most inconsiderable structures, as well as to more pretentious buildings an air of taste and refinement indicating a growing tendency to the cultivation of the beautiful in art. The introduction of terra-cotta decorations in brickwork may also be referred to as imparting an artistic interest, wherever they are tastefully and harmoniously applied. In this connection it should be remarked, that the popular idea that comfort, convenience, and good taste in the design and construction of well-studied architecture are necessarily costly elements in building, has no foundation in fact. On the contrary, there is no reason why the most inconsiderable buildings, whether in town or country, far or near, should not be made to possess an amount of comfort and taste equal to more pretentious structures and at a greatly reduced pro rata rate of expenditures.

It is observable in all important centers of civilization that the *effete* forms and constructions of bygone ages have ceased to rule in modern art;—in other words, the tendency of architects of the present day to do their own thinking, is everywhere apparent, which is not to be objected to, provided they do not degenerate into the production of forms and combinations not in harmony with the acknowledged elements of good taste. We also find unlimited license exercised in the modification and adaptation of the forms of "Pointed Architecture," which is understood to be a generic term indicating the entire genus of that species of building, and which covers a vast amount of peculiarities pertaining to different nations, from which studies in Mediæval art are furnished in endless variety.

Another decided epoch in the history of architecture is the revival of new classic forms of building in this country as well as in England, such as the Queen Anne, the Elizabethan, the Jacobean and the Colonial styles, which, if properly handled, may be made to furnish a pleasing illustration of the better class of the early buildings of this country; which, if its distinctive characteristics are made sufficiently obvious, may become emphatically the *American Colonial style*, as the Queen Anne, the Elizabethan, and the Jacobean may, with equal propriety, be known as the *English Colonial style*. The great distances which separate the art centers of our country are already, in a measure, overcome by the establishment of associations kindred with our own Institute, and working on the same general principles of organization which imparted to it life and energy on its assuming the character of a nucleus to a national confederation of architects. A recognition of so comprehensive a professional relationship in the interests of science would, undoubtedly, tend to promote a *esprit de corps* which is greatly needed.

The following are the *twelve* separate architectural associations at present organized and in active operation, to wit:

Western Association of Architects, at Chicago.
Illinois State Association of Architects, at Chicago.
Indiana State Association of Architects, at Indianapolis.
Missouri State Association of Architects, at St. Louis.
Kansas City Society of Architects, at Kansas City.
The Architectural Association of Iowa, at Des Moines.
The Architectural Association of Minnesota, at Minneapolis and St. Paul.
Buffalo Society of Architects, at Buffalo.
Kansas State Association of Architects, at Topeka.
Association of Ohio Architects, at Cincinnati.
Association of Texas Architects, at Austin.
Nebraska State Association of Architects, at Omaha.
Chicago Architectural Sketch Club, at Chicago.

Arrangements can, no doubt, be made with such architectural organizations as now exist, and with such as may hereafter be established, to communicate annually with the American Institute of Architects, through its secretary in New York, such information as will enable us to furnish the entire membership of the confederation, with the reports of the proceedings of each annual convention, covering succinct accounts of our national status.

It is gratifying to know that the influence for good in the multiplication of associations of professional architects has already been felt throughout the country, in improvement in taste, in the character of design and construction, and in promoting the advancement of our art and the sciences that underlie it, as well as for the development of artistic merit, and for the diffusion of an intelligent knowledge of the principles involved in the thousand and one ingenious contrivances and inventions now existing to promote health, comfort, safety and convenience in the disposition of our varied environments.

The secretary read the report of the Board of Trustees, giving an account of meetings for business during the past year. Referring to the report made by the delegate chosen to represent the A. I. A. at the first convention of the Western Association of Architects, the names of honorary and active members deceased during the year were read, and attention was called to the committee formed for urging the passage of a federal act for the promotion of architectural competition, with special reference to public buildings, and its action in joint committee with the Western Association of Architects. The report also called attention to the action of the Boston Chapter in a circular letter addressed to other chapters to further the erection of some enduring monument to the memory of H. H. Richardson, late Fellow A. I. A. The institute was reported to be steadily growing in membership and influence. Seven new fellows and six new associates were elected during the year—one associate was promoted to fellow, two associates have resigned. There are now 192 professional members. A movement is on foot for the establishment of new chapters in Indianapolis, Ind., and Pittsburgh, Pa.

The report was referred to a special committee, to be named by the chair, to report later to the convention.

Mr. O. P. Hatfield, treasurer, then read his report: Received from fees, etc., \$1,389.50; balance from last year, \$263.64; total, \$1,653.14; disbursements, \$1,512.10; balance on hand, \$141.04.

There was reported a nucleus of a fund for a building for the purposes of the institute, which was greatly needed.

All matters in this report not relating to finance were referred to the special committee for report to the convention.

Alfred Stone, H. H. Holly and R. M. Hunt, were appointed by the chair to audit the treasurer's report.

The delegates from the Western Association of Architects, J. W. Root and Sidney Smith, were announced, and invited by vote of the convention to take part in its deliberations. Mr. Root replied in behalf of his association, and ended his remarks by saying: "Do not understand that the Western Association is in any way a rival of yours, but is established to

carry forward the work you are engaged in in the 'Wild West.' Again allow me to thank you for your reception of Mr. Smith and myself as delegates from the Western Association."

Reports from the chapters were then read:

The New York Chapter showed that its membership had increased, that its examining committee had been often called upon to exercise its functions with reference to the New York Building Law. The Willard Commission were reported as considering the important question what to choose from the selection of casts, etc., gathered by Mr. P. Le Brun; they also reported that the corner-stone of the building to contain them had been laid.

The Philadelphia Chapter reported that the contemplated meeting of the society at members' homes had been very successful; they referred to the municipal bay-window order, which had been repealed by vote of the common council, through the architects' efforts, but was vetoed by the mayor. The ordinance now existing compelling proper plumbing practice, and the enforcement of sanitary laws, had been effected by the efforts of the chapter.

Rhode Island Chapter reported that its monthly meetings had continued. The Committee on Entertainments had prepared a list of subjects for discussion at the monthly dinners; also problems for working out.

Baltimore Chapter reported the usual meetings; a good library, but the attendance was not as large as it should be.

Chicago Chapter reported increased membership of six. Its president, Mr. Jenney, who is also the secretary for Foreign Correspondence, not being present, wrote that he had attended to his duties in sending notices of condolence to families of honorary members deceased abroad, and had received replies.

The chair appointed as special committee for considering foregoing reports: James Kenwick, J. G. Cutler and G. A. Frederic.

The chair appointed as committee on nominations R. M. Hunt, E. J. Nickerson and C. A. Wallingford.

The paper read by T. M. Clark, of Boston, at the Nashville convention, on the subject of an architect's protective association (see proceedings of last convention, A. I. A.), was discussed informally.

Mr. Bloor moved the matter be referred to a special committee, of which Mr. Clark, the author of the paper, be a member.

Mr. Frederic was in favor of Mr. Bloor's motion, but thought as Mr. Clark was not at home, the discussion should be deferred to the next annual meeting.

Mr. Kendall thought this necessary, as Mr. Clark was in possession of further information, and it would be best to have him present.

Mr. Frederic withdrew his remarks, and Mr. Bloor stated that Mr. Clark was desirous of having the subject discussed, that he might obtain the opinion of the members.

Mr. Hatfield moved that Mr. Frederic be placed on that committee in place of Mr. Clark for this convention.

Amended by Mr. Kendall, that Mr. Frederic be asked to present his views upon the subject for discussion at the next session, which was adopted.

Mr. Glen Brown, of Washington, D. C., read an interesting paper on experiments in trap siphonage at the Museum of Hygiene,* which was referred to Committee on Publications, and ordered printed.

Mr. G. A. Frederic, of Baltimore, read a paper upon "Ethics of Architectural Practice," referring to the reference to the same subject in the president's address, and expressing some diffidence in presenting the paper.

Reference in the paper to some cases of unprofessional conduct, brought a motion from C. A. Wallingford, that the paper be accepted and referred to a special committee of three, appointed by the chair, with power to investigate, and if any irregularity existed among members, to report such charges preferred against such member.

Mr. Frederic said that he had no charges to prefer, but could substantiate any statements he had made, by evidence. He only spoke of the lack of unity and harmony among members, and it was to, as far as possible, call attention to and rectify an existing evil, that the paper was read.

Mr. Wallingford said that anyone bringing such a paper before the association must have some ground for doing so. If such people as referred to in the paper did not mean to do what was right when they came into the institute, they had better keep out, and if they did not do what was right they should be put out. (Sensation.)

The president suggested that the convention appoint the committee; and Mr. Bloor moved that Messrs. Wallingford, Cutter and Moser be that committee, which was done.

The meeting adjourned, to convene the following day at ten o'clock; and the afternoon was spent by the visiting members in examining buildings under the guidance of the New York Chapter.

An informal reception was given by Professor Ware, in the architectural department of Columbia College. The feature of the evening was the inspection of sketches of the recent works of M. E. Bell, the supervising architect, and the drawings submitted in the Kansas City Chamber of Commerce competition. Among the designs for government buildings was that of the proposed custom house and postoffice at Detroit. Mr. Bell was present, and also Mr. Moser, who now is engaged in the designing department of the government office under Mr. Bell.

Mr. Moser gave a facetious blackboard illustration of how national characteristics are carried out in ornamentation, which was very bright, and well received by the assembled architects.

The different works of the students, under Professor Ware, were inspected, and the general excellence of the Columbia College School of Architecture generally commented upon. Specimens of endolithic marble and of Belcher mosaic stained glass were upon exhibition. Mr. Caryl Colman, who represents the artists and manufacturers was present.

A pamphlet published by the Supervising Architect, giving a history of that office and its general organization and functions was placed at the disposal of members.

* Published in the *Sanitary Engineer* of December 11,

The drawings submitted in the Kansas City Chamber of Commerce competition were arranged on tables in the library, for inspection, and were examined with interest. Mr. Bloor showed photographs which he recently brought from Bermuda.

On the whole, this informal meeting was one of the most enjoyable and profitable of the convention.

SECOND DAY.

Meeting called to order at 11 A.M., President Walter in the chair.

The report of the Chicago Chapter, submitted by Secretary Pashley, was read and the informal report withdrawn.

Mr. Bloor read a report upon his visit to the convention of the Western Association at St. Louis as a delegate from the Institute. Mr. Bloor said the report was largely a synopsis of the official verbatim report of the proceedings of the convention published in *THE INLAND ARCHITECT*, and frequently referred to that journal as his guide in formulating his report. Mr. Bloor also spoke of the united efforts of the Institute and the Western Association in regard to the bill for the improvement of the architectural status of the supervising architect's office and the designing of government buildings; also of his cordial reception at St. Louis and his visit to Washington with the joint committee.

Mifflin E. Bell, the supervising architect, called attention to a pamphlet that had been distributed among the members, giving the history and operation of that office, and containing the draft of a bill which might be substituted for the one already before congress, but stating that he did not come to the convention to make any remarks but would like to hear the committee's report and then would be willing to answer any questions, etc. Mr. Bloor asked Mr. Bell if he would like to be added to the committee, but he said he could do more good independently, as a member. He thought there were things in the present bill fatal to its passage. The committee on Architectural Commission, appointed by the bill, was composed of men thoroughly incompetent to fill the office, and many other similar objections.

Mr. Kendall moved that the A. I. A. instruct its committee and ask the W. A. A. to instruct its committee to act in concert with Mr. Bell and formulate a new bill.

Mr. Kendall asked the representatives of the Western Association how soon that committee could act, and Mr. Root replied that, as a representative, he would bring the matter before the committee and as president of the W. A. A. he would see that it was immediately acted upon.

The motion was passed and the president, after remarking that though this placed the bill in a new shape, and perhaps seemed a step backward, he hoped that the object would be indefatigably pursued until the object was attained.

Mr. Moser read a very clever, facetious and forcible paper upon the prevailing architectural design, making a strong appeal for hard work and hard study.

Charles H. Wingate was introduced and spoke on the sanitary aspect of architectural practice. He took the ground that architects did not give sufficient attention to the sanitary conditions in planning houses, and cited instances of well-known buildings, in which he stated that defects existed, requiring the services of a sanitary expert, and that the time had come when the architect must become a sanitary engineer or employ such. It was largely in the work of repair that the sanitary expert was employed. The work of the plumber was merely mechanical; the sewer gas scare had been vastly exaggerated. Not enough attention was given to earth currents, damp and damp walls. He dwelt particularly on the importance of making houses damp-proof and water-proof, citing numerous diseases as resulting from soil moisture. He alluded to the typhoid fever outbreak in a section of Brooklyn last year, and stated that in the particular district affected none of the houses had traps on the main drain, the absence of which traps he considered as offering facilities for the spread of this disease. He stated that many skylights now put in buildings did not act as ventilators, but were made tight. He thought the tendency for decoration and fitting up the interiors had the result of excluding light. He indorsed the requirements of the Board of Health of New York in requiring cast-iron pipe in the houses, and stated that in his experience he had never seen but one earthen pipe house-drain laid, in which the joints were tight. He concluded by urging that the sanitary question should be taken up vigorously, and especially by architects.

The special committee upon board of trustees, the treasurer and chapter reports reported favorably upon the indorsed recommendations of the various chapters, and the social features of chapter meetings, recommending their continuance; also that the committee on federal architecture be continued on the part of the institute in conjunction with that appointed by the Western Association, with power to act.

The report of Mr. Frederic on Architects' Protective Association was called for. He stated in detail a general plan for the formation of such in the United States, and asked for an open discussion of the subject. He said he would support a joint committee with the Western Association to carry out the purpose of establishing such a society here to report to the next convention, or to a committee of conference.

It was moved that the subject be discussed. Mr. Root promised to appoint a committee on the part of the Western Association.

The negative side was discussed by Mr. Hazelhurst, who thought that it would be detrimental for architects to enter into a protective association and indorsed Mr. Kendall's view that architects should learn to protect themselves against themselves before they sought protection against their clients.

Mr. Bloor moved and amended by Mr. Kendall that the matter be referred to a joint committee, Mr. Clark and Mr. Frederic representing the institute, and Mr. Root and Mr. Smith the Western Association; these to select a fifth member. The committee appointed to consider the charges in relation to the unprofessional conduct of a Baltimore architect said that in the opinion of the committee that the member had been guilty of the most flagrant violation of all professional usage based upon documentary evidence of the most conclusive character.

Mr. Briggs said this case was only one in many, and should be strictly dealt with.

Mr. Root stated that the question arose in the last meeting of the Western Association, and a careful revision of the entire membership was ordered, so that none but practicing architects, and in honorable practice of the profession would be retained.

The report was adopted with the recommendation of the committee that the Board of Trustees ask for the resignation of the offending member; and also they recommend that in any such future case the offending member be expelled. They also recommend the appointment by the board of a standing committee to consider all such cases.

Upon motion, the report and recommendations were adopted by vote of the convention.

The election of officers being next in order, Messrs. Upjohn and Hazelhurst were appointed to act as tellers.

The election resulted as follows:

Thomas U. Walter, LL.D., of Philadelphia, president; A. J. Bloor, of New York, secretary; O. P. Hatfield, of New York, treasurer.

Board of Trustees, H. M. Congdon, of New York; Napoleon Le Brun, of New York; E. T. Littell, of New York; R. M. Upjohn, of New York; and secretary A. J. Bloor, ex-officio.

Secretary of Foreign Correspondence, W. L. B. Jenney, of Chicago.

The following committees were appointed:

Committee on Publications, H. H. Holly, New York; T. M. Clark, Boston; Charles Crapey, Cincinnati; J. McArthur, Philadelphia.

Committee on Education, Alfred Stone, Providence; Henry Van Brunt, Boston; Professor N. Clifford Ricker, Champaign, Ill.; T. M. Clark, Boston; Professor W. R. Ware, New York.

At the close of the vote for president, Mr. Walter said: "I return you many thanks for your kindness. I think you could have done better, all the time I have been your president, but I have done what I could, and have been in my place at your meetings as often as I could. I promise to take the position as your president for another year, if I live that long, but after that I hope you will allow me to take a rest. At all times believe me, I am yours, and deeply interested in your welfare, as I have been in that of the profession for nearly sixty years. Again accept my thanks."

Mr. Kendall: As long as Mr. Walter will permit us to use his name, the New York chapter will give him our hearty and cordial support.

Mr. Bloor read a motion presented by Mr. Bell, directing the trustees to consider means for providing for a permanent home for the institute.

Mr. Bell said he was surprised to find that the institute had no permanent quarters.

Mr. Littell urged the importance of this, and advocated the formation of a stock company for the purpose.

Mr. Hunt said the institute belonged to the United States of America, and that meetings should be held in other cities, and this would tend toward the permanent holding of meetings in New York. He also stated that this plan was proposed at first, and was abandoned. He did not consider it feasible.

Mr. Upjohn thought the movement should come from the members outside of New York.

Mr. Kendall moved that a committee of two be appointed, composed of M. E. Bell and E. T. Littell.

The motion was carried, and the committee instructed to report at the next annual convention.

Mr. Hunt called the attention of members to the forthcoming exhibit of architectural drawings by the architectural league, January 10, next.

Mr. Kendall moved the thanks of the architects for the use of the directors' room, kindly furnished by the New York Mutual Life Insurance Company. Motion passed unanimously.

Mr. Wallingford, of Minneapolis, moved the thanks of the visiting architects for courtesies extended by the New York Chapter. Passed.

Mr. Hunt extended to the visiting architects the invitation of Mr. H. G. Marquand to visit and examine his house on Madison avenue, together with his collection of works of art.

Upon motion, the convention adjourned to meet at the call of the Board of Trustees.

The afternoon was passed by a large number of visitors in viewing the residence of Mr. Henry G. Marquand. Through the courtesy of that gentleman, who as an art connoisseur is known to two continents, a most thorough inspection was permitted. The interest was added to by the presence of the architect, Richard M. Hunt, whose good fortune it was to design this beautiful home. The hall, each room and chamber, was in itself distinctive, yet harmonious, and contained tapestries, paintings, etc., that few art collections could surpass.

The evening was occupied by the annual banquet of the institute. It was given at Pinard's, and was one of the most enjoyable in the history of the institute dinners. The chair was occupied by Mr. Kendall, and the speeches that followed were well chosen. Mr. Kendall spoke of the honored president, Thomas U. Walter, and his health was drank standing.

Mr. Renwick said the institute was to be congratulated upon its foreign secretary, and proposed that he be perpetuated as the representative of the *Neo-Grec* style, as he succeeded in getting an answer from the Greeks without knowing it.

Mr. Hunt spoke of his late visit to England and France, and his election as corresponding secretary of the Royal Institute, of his visit to the Beaux Arts, and the interest European architects take in things American, etc., a very entertaining speech which was loudly applauded.

This was followed by speeches by Messrs. Wallingford, Sturges, Root, Stone, Prof. W. R. Ware (a delightful description of the American school of art at Athens), Robinson, Frederic, Hazelhurst and Bell.

Mr. Bell suggested, and Mr. Hunt moved, and it was ordered spread upon the records, a vote of thanks to Mr. George C. Mason for his very efficient work as secretary of the institute. Speeches were also made by Henry C. Meyer, R. C. McLean, Sidney Smith, W. R. Briggs, E. L. Walter and John Moser. The banquet was in every way a success, and happily closed the twentieth annual convention of the institute. There is a strong probability that the next meeting will be held at Chicago.

Regular Meeting of the Illinois State Association.



THE regular monthly meeting of the Illinois State Association of Architects was held on Saturday, Dec. 4, 1886, President Adler in the chair.

The president suggested that, as the minutes of the previous meeting had been published in *THE INLAND ARCHITECT*, the reading of them by the secretary be dispensed with. It was so ordered.

The President: The special order of business, as set by the Executive Committee, is the consideration of the bill entitled: "An act to provide for the regulation and inspection of the sanitary construction and alterations or modifications of buildings in cities and villages, and to secure proper ventilation and sewerage systems for habitable buildings, and declaring certain things to be nuisances, providing penalties and for the issuing of injunctions in certain cases," as reported by the special committee to whom this matter was referred. If it is your pleasure we will cause the secretary to read this act as proposed, section by section, and we will act upon it as you wish.

Be it enacted by the People of the State of Illinois represented in the General Assembly:

SECTION 1. It shall be the duty of the owner or other person interested in the contemplated erection or alteration of any building, within the corporate limits of any city or village in this state, in which there is established an officer or department of health, to obtain from such officer or department a blank, entitled "Description of Building," and fill the same in a manner fully describing said contemplated building, with its plumbing and sewerage fixtures, and to submit such description to the said officer or department for examination and approval; which approval shall be granted only upon condition that assurance direct and implied is by said owner or said other person given to said officer or department of health that the sanitary conditions of the building will be, when completed, in accordance with this act. And in case the said building intended to be erected (or extensively modified) be for purposes of habitation, then and in such case a full set of drawings, showing locality and arrangement of plumbing, sewerage and all other sanitary arrangements to be provided in the said intended building, shall by said owner or other person (or the architect or plumber of said owner or person), be submitted to said officer or department for action as above set forth, before any portion or part of the said building shall be commenced or modified.

The President: I will say, on behalf of the committee, that in the committee there was much discussion as to whether it was best to make the procuring of this permit from the health department specially the matter of the architect, or whether it should be left as the duty of the owner of the building. Your committee took the position that, inasmuch as the ground upon which the building was erected belonged to the owner, as the building erected belonged to him, that he was the beneficiary of all that would be done; and if there was any violation of the ordinance by which there would be economy secured in the construction of the building, he would be the beneficiary also; and that in every way he was the one most interested in the good sanitary condition of the building; and that therefore it should be primarily his duty to secure the passage of this act. Of course there is nothing in the act as proposed that will prevent the architect or owner or any other person acting as the representative or agent of the owner of the property, and for obtaining that permit for him; but we thought that, primarily, all responsibility should rest with the owner of the property, as the one to be benefited by the erection of the building. There was some difference of opinion respecting procuring the orders from the health department. Representations from the health department wished to leave the responsibility for securing the permit solely with the plumber or architect. It was our opinion, for the reasons I have just stated, that it would be better to locate that responsibility with the owner of the building, and that he could then select such architect, plumber or other representative to procure the permit for him as he desired; and that, eventually, the responsibility should rest in the proper place.

Normand S. Patton: The question is, when is an architect responsible, and what is his responsibility? Of course if the architect does not superintend the building he cannot tell what the owner would do.

The President: It was for that reason that we concluded to make the owner primarily responsible; that the responsibility of the contractor is only incidental to their employment or agency; that, therefore, they might act for the owner if he requested them to do so, as part of their functions.

Frederick Baumann: Mr. Genung thought that he could get at the architect and the plumber most directly, and that it would be very complicated sometimes to get at the owner, but I think that the law will hold the agent, or the owner himself.

The President: You will see in a future section how we have endeavored to make it impossible to erect a building without proper authority from the head of the department.

SECTION 2. No building permit shall be granted or issued by any officer or building department in such city or village before the approval provided for in Section 1 of this act is obtained (in the manner provided in said section), and presented by said owner or person to said officer or department.

The President: You will see that this section is one by which we intend to make it possible for the health department to control these matters. Before the building department can issue a permit, the building department must see a corresponding preliminary permit issued by the health department, just as it is impossible to procure a building permit from the building department without showing a receipt from the water office for the water to be used in the building. So it will be impossible to secure

a permit for a building without first having these preliminary papers. It is by that means we propose to control the owners of buildings.

Mr. Baumann: Otherwise, you see, the permit would be given, and they would go ahead, and nobody would interfere.

SECTION 3. The person executing the plumbing work, or causing its execution, in any such building other than mere repairs, shall (before in any way concealing or allowing such work to be concealed) notify, in writing, the said officer or department of health to the effect and substance that the said plumbing work is then and there in the state of completion, and shall allow such officer or department a full day's time after said notice (not including Sunday) for the proper inspection of, and officially passing upon said work.

O. J. Pierce: It seems to me in regard to that, that it militates against the ordinary manner of doing work. A portion of the work is put in, covered up, and the plastering done, and then the balance is done.

The President: It is always possible, I think, to have plumbing done in such a way that all parts are accessible for inspection. If the passage of this law will cause such modifications of such loose and slipshod methods as will compel the plumber—and for that matter, the architect—to so arrange the pipes of all kinds that they will be visible and accessible for inspection, it will be a gain to the public at large. It does not necessarily follow that things that are customary are in themselves good. It is customary to do a great many things in a certain way because it is convenient to do them so and convenient to have them so; but I do not know whether it is necessary or desirable to study the convenience of the plumber, the carpenter, or the plasterer.

Mr. Pierce: It seems to me that calls for a radical change in existing methods—a more radical change than, perhaps, the profession would be willing to commit themselves to; not that I have any personal interest in the matter.

Mr. Baumann: They cannot commit themselves until there are some changes made. Now, for instance, the pipes are made in a very slipshod way at present, but after this law is passed there will have to be an improvement; that is to the effect that you have got to put a board against the wall, screw on your soil pipes, etc. in a decent manner, and have it in such decent shape that you can show it.

Mr. Pierce: The question arises whether that is in all cases necessary; whether a good serviceable job of plumbing cannot be done in accordance with the existing methods without resorting to these radical changes.

The President: I think that as architects we should be unqualifiedly in favor of everything that will tend to secure better work than is being done now. We are all aware of the fact that where plumbing work is concealed, and particularly where it is permanently concealed, the defects—intentional or unintentional—cannot very well be discovered, nor easily remedied. If we adopt methods by which every part of the plumbing apparatus of the building is accessible (it may cost us considerable money and time), but if we can discover methods by which that plumbing can be made easily accessible to inspection, we will administer an antidote to much slipshod and careless work, and, certainly, to much rascally work with which we now have to contend.

Mr. Pierce: It certainly will largely increase the cost of the present construction.

The President: In the case of a building in which the difference would be seriously felt,—say houses that cost anywhere from \$2,000 to \$5,000 or \$6,000; buildings put up for renting purposes, where the plumbing of the entire building, say, costs from \$250 to \$500,—now the increase in the cost of plumbing in such building, by reason of the improved methods, probably would not be more than ten per cent. We will go further: As the cost of plumbing could not be more than ten per cent, there would be a matter of \$25 to \$50. In the matter of carpentry it might add as much more. So there would be a difference of from \$50 to \$100. In other respects there would not be any; but we will say there might be a further addition that would bring the difference from \$75 to \$150 in a house of that kind. The annual interest on that would be high, say ten per cent; this would be \$7.50 to \$15. Now, I firmly believe, the difference in the cost of plumbing in a building of that description would be diminished by more than \$7.50 to \$15 if the plumbing were all so constructed as to be easily accessible.

Mr. Patton: It seems to me that where there is only a back room in addition to the kitchen, where the bathroom is some distance from the kitchen, with the exception of the supply pipes, every foot of pipe would be accessible, or there would be no difficulty in making it so. Every foot of supply pipe, hot and cold water, and wastepipe, and every trap could be accessible and the expense next to nothing.

The President: When I reckoned the additional cost I took into consideration extreme cases. There are very few among us but would possess sufficient ingenuity to try the experiment if we knew it had to be done.

Mr. Pierce: I have some curiosity to know how many architects here present would execute their plumbing in that way.

The President: They should do so.

SECTION 4. Every habitable building hereafter erected in any such (said) city or village, shall have its ground floor covered with a stratum of cement and gravel, or asphaltum concrete, not less than three inches in thickness.

Passed with some informal discussion.

SECTION 5. A habitable room in any building shall have one or more windows, of dimensions not less than one-tenth of the area of floor space of each room, and an open space or light shaft shall be established for such window or windows, and shall have an area which, for a three-story building, shall equal not less than one-sixth part of the area of rooms and halls thereby to be aired and lighted. Such minimum size shall receive or have an increase of five per cent for each and every additional story of building.

The President: This means that every room in a habitable building that does not receive its light directly from out-doors shall have a window of a given size—I believe one-tenth the area of the room—and next, that if such windows do not open directly to the outer air, they shall open upon a light shaft, the minimum area of which shall be for a three-story building, not less than one-sixth the total area of the rooms and halls lighted by it; and for a building higher than three stories, it shall be increased in area by five per cent for each additional story.

SECTION 6. Every skylight hereafter constructed in any such building shall be permanently ventilated through openings or air ducts in or near, and extending at least one foot above its top, and the area of such ventilating openings shall not be less than one twenty-fifth part of the area of skylight opening.

Mr. Pierce: I would ask if that means that the ventilator must always be left open?

The President: Yes, sir; it must always be open.

Mr. Patton: What is the object of it? I should think there would be a good many skylights that would not need any.

The President: I find from my own observation that the tendency in every building in which much air is of the greatest necessity (the residences of the poor), the practice uniformly is that as soon as the cold weather comes to close up everything tight. If there are ventilators in the sides of the skylight, or if there are openings in the sash in the sides of the skylight, they are closed. If there is a pipe ventilators in which there is a damper, the damper is carefully closed, because when they open these it lets the cold air into the room, which takes more coal to warm their places, etc. People will almost always disregard an *ultimate* benefit to be secured for an *immediate* one. They see the advantage of keeping their place warm with a small expenditure for fuel—that is something they can readily grasp; but they forget that by closing the ventilators they invite doctors' bills, loss of health, time, etc., that will amount to a great deal more than the small loss in fuel.

Mr. Pierce: Suppose the light shall be directly connected with the bath room, must that be left open all the time?

The President: It should be.

Mr. Pierce: If that is an open skylight leading from the bathroom and open at all times, I do not see the sense in it.

Mr. Patton: I move that that be amended so as to read clearly as to skylight over ventilating shaft of room.

Mr. Pierce: I would have suggested that the word "permanently" should be stricken out there, leaving the ventilator to be used when required, the same as we use a window.

The President: I think, on behalf of the committee, and also on behalf of the health department with which we are coöperating, I should decline to accept such an amendment, for the reason that the operations of this bill are intended more particularly to benefit the habitations of the poor, where many people are congregated in a small space, and where the necessity for ventilation is not generally acknowledged, and where, unless efforts are made to make such ventilation compulsory, any means of making the opening into the ventilator mentioned in this section anything but permanently *open* would be used to make it permanently *closed*. This matter was fully considered by your committee and by the health department. The observations of the health department are to this effect, that wherever there are ventilators that can be closed in a tenement house, they will be closed and kept permanently closed all winter.

Mr. Pierce: That is undoubtedly the case. But would it be regarded as an evasion of this act to interpose a ceiling light that might be opened or closed between the bathroom, for example, and the ventilating shaft?

Mr. Baumann: It would in my opinion.

The President: It would depend upon circumstances entirely. If that ceiling light were to fit close and snug and tight, so as to render ventilation impossible, it would be considered an evasion of the act.

Mr. Treat: You cannot pass a law to make a man take a bath in a cold room.

The President: The chances are that in houses that are used by single families, where baths are taken, there is a reasonable regard also for the ventilation of the bathroom, and the regulation of the supply of air to the bathroom could safely be left to the occupants of the room.

Mr. Pierce: In other words, they might be allowed to stuff something in the opening or cover it up, if they chose?

The President: It is not likely that the efforts of the health department, to secure a good sanitary condition of buildings, will extend to the inspection of houses where single families reside after they are once occupied, unless such inspections are made at the request of their occupants.

Mr. Pierce: I can see what seems to me an objection to it; at the same time I have no desire to push it, in the face of your manifest wishes, that it shall be allowed to stand. Speaking for myself, wherever I have had occasion to put a skylight over bathrooms, as I do frequently, I always put a register in that I can open or close; for the same reason as that I would not make a window with one light knocked out in order to secure ventilation; but should trust to the intelligence of the occupants to open the window. I do not believe that any compulsory act of that kind would be required in a good class of dwelling houses. However, it might be required in a lower class.

SECTION 7. A habitable room in any building hereafter erected in any such city or village shall not be less than eight feet in height between joists of floor and ceiling, nor shall its floor be located more than three feet below the established inside grade at the line of the lot of land upon which said building is or is to be erected. No such room (except an attic room) shall be established in any present building heretofore erected unless the said room be established and constructed in accordance with the requirements of this act, provided, however, that in buildings heretofore erected, an attic room may be ten inches less (at its lowest point) in height than said eight feet.

The President: In explanation of this last clause, I will say that there is an existing ordinance with reference to heights of rooms in attic stories. For instance: you have a cottage 20 feet wide, you have a room in the middle; now, you would not be compelled to cut off two triangles at the sides if you did not want to, those triangles give so much additional air to the occupants of the room.

A Member: In regard to the location of the floors, the question is whether the limit of three feet is a reasonable one.

Mr. Baumann: Mr. Patton wanted it two feet.

The President: The grade known to the city is curbstone grade.

Mr. Pierce: Then that could mean three feet below curbstone.

Mr. Baumann: But here it says distinctly, "the established inside grade."

It was moved and carried that the words, "inside grade" should be changed to "curbstone grade."

Mr. Pierce: What would be understood by an habitable room? Does it mean any room that is occupied at any time? For example, would a dining room be considered a habitable room?

The President: Yes, sir, it would refer to dining rooms and kitchens as well; and there again, we have got to take care that the public at large as represented will be compelled to rent houses as they are given, and people who build houses for the purpose of renting must have certain restrictions placed upon them.

Mr. Baumann: There are tenement houses where the basement is as much as six or seven feet, even, below the grade or curb, and those basements are arranged for habitable rooms, for which they get \$7 or \$8 or \$10 per month, and have poor people living and sleeping in these rooms.

The President: I built one basement floor as much as six and one-half feet below the grade, if I remember right. I protested against using the basement at all for the purpose of a habitation, but the person insisted on having it so. I wish to say that I have rejoiced greatly ever since in the fact that, although the place has been built two years, he has not had a tenant in his basement, and as the person owning it was my own brother-in-law, I have had abundant opportunity of indulging in the joke at his expense.

SECTION 8. Every water-closet or bathroom hereafter constructed in any such city or village shall have permanent automatic ventilation through an independent air shaft not less than one square foot in its cross section. Such shaft shall extend not less than two feet beyond the surface of roof, and be not below any peak, observatory or other construction upon the roof thereof that may be located within twelve feet of such shaft, and such closet or room shall be lighted by a window, either in an exterior wall of the building, or in a light shaft constructed for the purpose, or by facing a general light shaft or any adjoining room which said window shall (in said last mentioned case) be stationary.

S. A. Treat: That calls for a flue of 144 square inches?

Mr. Patton: That is too far.

Mr. Baumann: I have made them that size, and have had to put in a kind of flap, so that they could regulate it.

The President: We had a great deal of difficulty with reference to this with the representatives of the health department. They insisted on making this flue much larger, and it was with great difficulty that we got them to assent to having the flue so small. We all know that a small flue would probably answer just as well.

Mr. Pierce: If our legislature got hold of that they would cut it down to one-quarter of a square foot.

The President: They might, and they might not; the action of the legislature is as uncertain as that of a petit jury, or the supreme court.

Mr. Baumann: I think I should move to cut this down to one-third; four by twelve is enough.

Mr. Patton: How would it do to place the size of this ventilator directly proportionate to the size of the room, just as the size of the light shaft is made proportionate in size to the room, and to instruct the committee to modify that act in such a manner as to establish a definite proportion between the size of the water closet and bathroom?

Mr. Baumann: I think if we specify a minimum, and then let every architect who comes there to do it change that to satisfy himself, there would be no objection. Bathrooms are generally small, anyway. I would have it four by twelve, and let the architect take care of the rest of it. I think it is better. This law is a somewhat precarious one. I know that cases will come up where you don't know where you are; you can not foresee what will come up.

The President: It would be very strange if we could make a law that would cover every case. It is moved and seconded that the section which has just been read be so amended that the minimum size of the ventilating flue required for a bathroom or water closet, be fixed at 48 square inches instead of one square foot, as in the report of the committee. Carried.

SECTION 9. No privy vault of any kind shall hereafter be constructed or allowed by the owner of any lot or lots of land, situated in any such city or village, to remain in any building, or upon any lot of land adjacent to a street or alley on which there is a public sewer established in front of or adjacent to said building or lot.

Passed without discussion.

SECTION 10. No alterations, additions, or modifications which will change or alter any or all of the sanitary conditions or arrangements in any building erected or located in any such (said) city or village, shall be made, except upon prior express approval, in writing, of the said officer or of the said department of health. Nor shall any additional structure be erected upon any lot of land situated within such city or village upon which there is already a building erected without such approval, and a special permit in writing from said officer or department.

Passed without discussion.

SECTION 11. All sewerage drains hereafter laid in such city or village shall be laid with a uniform decline of not less than one-tenth of an inch to the foot, and there shall be constructed by the owner of any such building a trap and adjacent air inlet in connection with the drainage system of each building, where such drainage system is located, either wholly or in part without such building, said air inlet shall be located outside of said building, and shall be kept clean and unobstructed. The entire sewerage systems in any such building hereafter erected shall be so constructed as to allow ready and complete inspection at the time of its completion.

Mr. Pierce: There is no allusion made to the size of the sewerage.

The President: It is difficult to determine that, in a city like Chicago, at least. There are, also, regulations as to that, and it is probably unwise to fix any dimensions. The danger in all such cases is that people are more apt to make sewers too large than too small. At the same time, I think it is better to let that matter regulate itself, leaving it to the general intelligence of those planning the sewerage. The conditions vary so much that we could not make specific regulations.

SECTION 12. Metal sewage drains and soil pipes, if not enameled or made of non-corrosive material, shall be covered inside and outside with a coat of asphaltum, and all their joints and connections shall be made absolutely airtight by means of molten lead or similar metal, or by means of molten asphaltum, either with or without an intermixture of sulphur.

Passed without discussion.

SECTION 13. Every soil and every wastepipe hereafter constructed and placed as such in any such city or village, shall be of cast-iron, or brass or porcelain, and when such pipe is put up for use, it and the joints thereof shall be capable of sustaining an internal pressure of not less than fifteen pounds to the square inch of surface.

The President: You will note that this is an important section, and is intended to take the place of a long array of clauses with reference to the

manner in which joints were to be made, etc. We took it for granted that if we were to prescribe a test of reasonable severity, that it would insure us pipes that would be secure against leakages from ordinary causes. It is not at all likely that there will ever be a greater pressure than fifteen pounds to the square inch.

Mr. Pierce: Was it intentional to rule out lead as a material for use in soil and waste pipes?

The President: Yes, sir. It is probably needless to explain the reason why.

Mr. Pierce: I should be disposed to question it.

The President: There would probably be an exception made there for short lateral branches and connecting pipes.

Mr. Pierce: I was not aware that sanitarians had condemned the use of lead pipes.

The President: It is not necessary for sanitarians to do it; they condemn themselves. Go into any house where there is a lead soil or waste pipe, of any height, that has been in use but a few years, and you will find it bagged and warped and twisted and torn apart.

Mr. Pierce: Does not that depend very much on the weight of the lead used? I remember cases where they have stood fifty or sixty years, and when taken out were perfectly good.

The President: Those cases are very exceptional. It has been found, in almost every case of that kind, in places where they are exposed by reason of their use for carrying hot water or by reason of the warming of the building by heating apparatus to various temperatures and to any considerable extent, that it has been found impossible to so fasten them as to prevent their tearing away from their fastenings, etc., and, furthermore, there seems to have been, in many instances, a mechanical action from the pipe itself.

Mr. Baumann: The plumbers are all against lead pipes.

Mr. Pierce: I beg your pardon, sir; but I find that, while they are not all in favor of it, while plumbers are not unanimous in its favor, I find that some of the oldest plumbers approve of it heartily. My only question is as to whether that is a point that is so thoroughly settled that it should be ruled out. Personally I do not believe it is.

The President: It is not altogether a question of what the plumbers think, but I think a sufficient number of cases of the complete failure of lead soil and wastepipes come under the observation of every one of us to make it proper that we condemn their use.

Mr. Baumann: The plumbers are interested in the use of lead, that is where they make their money; but at the same time they are against it.

Mr. Pierce: This covers wastepipes as well as soilpipes?

The President: Yes, sir. I should think it would be proper, perhaps, to insert the clause "except short lateral and connecting pipes; and permit those to be made of lead. Their use is in places where it is difficult to use other pipe. Where they are sufficiently short and in plain sight the difficulties arising from the expansibility and tractability of the lead are not of so much importance, and do not produce such disastrous effects.

If no objection is raised the committee will consider itself instructed to add such a clause to this section.

No objection being raised it was so ordered.

SECTION 14. The in-take ends of all drains and their branches in any building shall be curved to correspond with an inner radius of not less than twelve inches, so as to properly meet the horizontal drain and the perpendicular waste and soil pipe, and form an airtight connection with them, and there shall be near the lower end of such curved piece a hand-hole with airtight covering.

Passed without discussion.

SECTION 15. The use or construction of any kind of pan water-closet in any building in such city or village is hereby declared to be a nuisance, and the use thereof is hereby prohibited. All water-closets used in any story of such building or buildings above the basement story shall be so constructed as to be connected with and flushed by means of a tank or tanks.

Mr. Cleveland: I saw an old plumber the other day, and he thought the pan closet the best water-closet used.

Mr. Gay: I have been at a meeting of the plumbers, and they have agreed among themselves, actually, that it is the best closet, and have put them in their own homes.

SECTION 16. No chimney flue of water leader-pipe shall be used for conveyance of exhaust steam or for ventilating soil or wastepipe.

Passed without discussion.

SECTION 17. All sewerage and plumbing work in all buildings hereafter constructed in any such (said) city or village, shall be executed in a thorough manner satisfactory to the said officer or department of health, and all drains laid in any such building, shall be laid with the joints thereof made capable of resisting the water pressure resultant from filling the said pipe with water to their in-take ends, and it shall be the duty of said officer or department as the case may be, to make suitable and efficient tests as to the quality of all such work, and to test all soil and wastepipes when put up for use in any building, by subjecting them to an internal pressure of fifteen pounds to the square inch, and to test all drains by filling them with water to their in-take ends.

Mr. Baumann: I would say that there was a good deal of discussion in regard to this, and it was even proposed to specify how the drain should be laid, covered, etc., but that was considered to be unnecessary. In regard to this particular clause, there is to be a test made by the officer if he wants to do it, and that test will insure the tightness of the joints of all drains that are laid; and if they do not make the test and have the joints in tight, of course it is their fault.

The President: We thought that was the best means of overcoming the difficulties that we had to encounter. I presume every member of the committee and every inspector of the board of health with whom they had consulted, had some panacea for laying drainpipes that would make them tight, but it was discovered that each individual method was good only if the work was done right; and we came to the conclusion that if we were to leave the method of making these pipes tight to the person doing the work, and only insist upon a test that would insure their being tight, that we would be doing all that was necessary for the public.

SECTION 18. Every water-closet, sink and other plumbing fixture placed and provided in and for the use of any building hereafter erected in such (said) city or village, shall be connected with the sewer and provided with efficient trap, sufficient to prevent at all times the passage of air through the pipes from the sewer to the said fixtures, and

no trap shall be placed and constructed at the foot of any water, soil or ventilating pipe, and said plumbing or plumbing fixtures and pipes shall be so constructed as to permit at all times, without obstruction, the passage of a current of air from the air inlet mentioned in Section 11 of this act, below through all pipes last mentioned.

Passed without discussion.

SECTION 19. Overflow guards or safes to any fixture or fixtures, and all refrigerators, shall have independent wastepipes, and shall not be connected with the drainage system.

Passed without discussion.

SECTION 20. No grease-receiving basins or cesspools of any kind shall be constructed and placed for use within the walls of any habitable building hereafter erected within any such (said) city or village, nor shall any grease-receiving basins or cesspools heretofore constructed in any habitable building in such (said) city or village, be allowed to remain thereon or therein longer than thirty days after this act shall go into effect. In all cases when the area of a building erected or to be erected in such (said) city or village, shall occupy the whole of its lot, such grease-receiving basins shall be constructed under the sidewalk or underneath the surface of the alley, if any such there be adjoining the premises upon which said building is situated.

Passed without discussion.

SECTION 21. No lead pipe shall in any building hereafter erected in any such (said) city or village, be connected with an iron pipe except by means of a metallic ferrule or other means expressly approved by the said officer or department of health.

Passed without discussion.

SECTION 22. No duct or flue for admitting air to an apparatus intended for warming, shall be concealed below the concrete under the lowest floor of any building.

The President: This clause is an attack upon the method of securing a fresh air supply.

SECTION 23. Said officer, or any duly authorized officer of the said department shall, so far as may be necessary for the performance of his or their said respective duties therein, have the right to enter at any and all reasonable hours in the daytime any building or premises in such (said) city or village.

Passed without discussion.

SECTION 24. Any person violating any of the provisions of this act, or any said owner or officer who shall neglect or refuse to comply with any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof in any court of justice, shall be fined not less than two hundred and fifty dollars, nor more than five hundred dollars; recovery to be had in the name of and for the use of the city in which the offense shall have been committed or incurred.

Passed without discussion.

SECTION 25. Any person convicted and fined as mentioned in Section 24 of this act, who shall for the space of twenty-four hours next ensuing after being so found guilty by said court, fail to comply with the requirements of this act, or any provision or requirement thereof, shall be deemed guilty of a misdemeanor, and upon conviction thereof before any court of justice, shall be fined in a sum of money not exceeding five hundred dollars.

Mr. Treat: I move that it be changed from twenty-four to forty-eight hours. Carried.

SECTION 26. The Circuit Courts of this state and the Superior Court of Cook county are hereby authorized and required to issue, upon due application of any officer or department mentioned in Section 1 of this act, or of his or its duly appointed agents, in the name of said officer or department, an injunction restraining or preventing the use and occupation of any such (said) building or structure which is or shall hereafter be erected, altered or maintained, or the sewerage system of which shall be constructed, altered or maintained (or any portion thereof) used in violation of this act, or any of the provisions thereof.

Passed without discussion.

SECTION 27. Any and all laws of this state in conflict with this act are hereby repealed.

Passed without discussion.

The President: Mr. Treat desires that an informal vote of this meeting be taken, for the purpose of ascertaining the sense of the members of this association with reference to the matter of underground air ducts, that is, he wishes to ascertain if any of the members, and if so, how many of them, are in favor of the use of underground ducts.

Mr. Randolph: I will say that for eleven years I have tested this matter, and the best thing in the way of an air duct is a sewer-pipe underground. If I had an abundance of money, I would not take air into a building in any other way. This is from an experience with all kinds of wastepipes.

Mr. Treat: A man would not be supposed to build an air duct under a building so low that it would be filled with water part of the time?

Mr. Randolph: That can easily be remedied: the pipe can easily descend upon the outside, where you can open it, and see if there is any moisture there.

Mr. Pierce: In my own practice I have been using glazed tile for the air inlets generally.

The President: Those who are in favor of underground air-ducts will please signify it by rising.

The vote was tied.

Mr. Randolph: The consideration of this bill, I think, would be well to make the special order of business for our next meeting. I presume there is no absolute necessity of taking action before that time. That will be the first week in January, and the legislature does not meet until January. I have taken a part in this debate, although there have been several questions come up that I am not satisfied about, and I would like to read the bill more carefully. I think it would be well to make it the special order for next meeting, and state the provisions of the bill.

The President: It was thought that the publication of the bill in THE INLAND ARCHITECT, *Sanitary News* and *Building Budget* would have brought it to the notice of all of the members of the association, and would have awakened a sufficient interest and been read by all the members, and that a larger representation would have been present at this meeting. It is a matter of sufficient importance that it will perhaps not be wasting the time of this association if it is made the special order of business for another meeting, and if the attention of the members is particularly drawn to that fact by a circular issued by the secretary, and, perhaps, it might not be amiss to invite representatives of the Board of Health, perhaps of the building inspector's office, and perhaps also of the sewerage department at our next meeting.

Mr. Baumann: The plumbers, too?

The President: You might invite the master plumbers to be represented here by a committee, also the association, which, I believe, has been formed of sewer builders.

Mr. Baumann: Yes, they are in a fight—the plumbers and sewer builders—and if we want any assistance against the plumbers, we can get it.

The President: I do not think it would be right if we were to ask these technical publications, *THE INLAND ARCHITECT*, *Sanitary News*, etc., to again publish the text of this bill. The amendments made at this meeting were so few that it would be trespassing on their good nature.

Mr. Randolph: I would suggest that the secretary send a circular referring to these publications.

The President: If there is no objection I will declare the suggestion of Mr. Randolph the sense of the meeting: That this bill be made the special order of the next meeting of this association; that the secretary be requested to call the attention of the members particularly to that fact, and to the publication of the bill; that the secretary request the Master Plumbers' Association, and Master Sewer Builders' Association, to each send a committee to represent them; and also to notify the health department, the building department, and the sewerage department of this city.

Mr. Baumann: Will the secretary send to the sewer men and the plumbers three copies of this bill?

The President: They will all see it. The secretary might state in his notice the date of the next meeting of this association. I do not know but we had better have two meetings in this month. The Executive Committee can fix the date of the next meeting, but the circular had better be sent out. If there is no other business before this meeting I will declare it adjourned.

The meeting adjourned subject to the call of the Executive Committee.

Association Notes.

MASTER CARPENTERS AND MANUFACTURERS OF WOOD BUILDING MATERIALS ASSOCIATION.



The regular meeting of this association was held Thursday evening, December 9, President Frost in the chair. In the absence of Secretary Clark, Mr. Fred S. Hunt, of *THE INLAND ARCHITECT*, was appointed secretary pro tem. Minutes of meeting held November 16 read and approved.

Mr. Mavor, Chairman of the Membership Committee, reported one application for membership, that of the Malcom McDonald Lumber Co.

Mr. McKay moved that the secretary be instructed to cast a ballot electing the

company to membership. Motion seconded and carried.

Mr. Mavor reported the resignation of Messrs. Hintze & Baker.

It was moved and seconded that the resignation be accepted and placed on record. Carried.

Mr. Grace, chairman of the committee appointed at the meeting of August 3 to draft resolutions in regard to form of specifications, contracts, etc., reported that the committee had looked into the matter thoroughly, and recommended that no action be taken at present.

Mr. McKay moved that the report of the committee be accepted and the committee be discharged. Motion seconded and carried.

Mr. Blair moved that the report of this committee and its unfinished work be referred to the Committee on Code of Working Rules, etc. Motion seconded and carried.

Mr. Grace, as chairman of the committee appointed November 16 to confer with committees of all other contractors' associations connected with the building trades, for the purpose of adopting some code of working rules for the coming year, etc., reported that the committee had seen Mr. Geo. C. Prussing, President of the Builders' and Traders' Exchange. Mr. Prussing had called a meeting of the board of directors of his association for the purpose of appointing a committee to confer with the committee from this association. Mr. Grace said this meeting was to be held December 11. Nothing more could be done until joint action could be taken, and he asked that the committee be given more time, which was granted.

A very interesting discussion of the eight-hour question, the apprenticeship system, and state law regulating the same, occupied the remainder of the evening.

CANADIAN SOCIETY OF CIVIL ENGINEERS.

The efforts made in the spring to form a society of civil engineers for the whole Dominion of Canada has been successfully consummated at a meeting held in Montreal on the ninth instant. Delegates from the local centers of Ottawa, Toronto and Montreal were present, each with their draft constitutions. After a lengthened and harmonious session, all the details were adjusted and a provisional committee appointed. It is intended to send a copy of the constitution, with a request note to join the society, to every engineer who has expressed his willingness to do so. Over three hundred are known to be favorable to the society.

The ballot papers for officers will be sent out about the 12th of January.

The Provisional Committee are: from Ottawa, Messrs. T. C. Keefer, C. M. G., chairman, H. F. Perley, W. P. Anderson, R. Surtees; from Montreal, J. Kennedy, P. A. Peterson, P. W. St. George, Professor Bovey; from Toronto, Colonel Gzowski, A. D. C. to the queen, Kinan Tully, W. T. Jennings, Alan Macdougall. Mr. Macdougall is secretary.

BUFFALO ARCHITECTURAL SKETCH CLUB.

The draughtsmen of Buffalo, N. Y., have formed a sketch club, the *personnel* of which compares favorably with any in the country. It is composed of about thirty members. Its officers are: F. R. Fuller, president; F. E. Townsend, first vice-president; Williams Lansing, second vice-president; J. S. Rowe, secretary; F. W. Fisher, treasurer. The association meets the second and fourth Wednesday of each month, and holds informal meetings on the intermediate Wednesdays. The constitution and by-laws of the club are modeled largely after that of the Chicago Architectural Sketch Club, and their general procedure is similar, papers being read and club competitions and sketching occupying the regular meetings.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The meeting held Monday evening, December 6, was called to order by President Harry Lawrie. About thirty members were present.

Immediately after the reading of the minutes of the last meeting, at which Mr. Lawrie was unanimously re-elected to the presidency of the club, he arose, and in a very appropriate speech, resigned his office.

Vice-president Geo. Beaumont, upon taking the chair, spoke a few minutes upon the subject of Mr. Lawrie's resignation, expressing the deep regret of the club that Mr. Lawrie was so soon to leave the city, and that he was obliged to tender his resignation.

Mr. Carpenter moved that Mr. Lawrie's resignation be accepted with regret, and that he be made an honorary member of the association. The motion was unanimously carried, and a look of regret was plainly visible on the face of each member.

A motion was made to present ex-President Lawrie with a gold membership badge, but as the club has not yet adopted an official badge, the motion was tabled.

A communication from O. Enders, stated that having associated himself with Mr. Lawrie, he was about to leave the city for Omaha, therefore he asked a leave of absence for one year. Mr. Enders said: "I have no desire to sever my connection entirely with this club. The meetings have been to me a source of enjoyment and education, and at some future time I hope to again associate myself with you."

Mr. Enders's request was granted.

The paper of the evening was by Mr. W. B. Lord, entitled the "Formation of Building Stone." The paper was an able one, and was very well received, Mr. Lord exhibiting, by way of illustration, an excellent collection of specimens of building stones.

After some discussion of the subject by the members, the meeting adjourned.

Later, it was decided to give a farewell supper in honor of the departing ex-president, Harry Lawrie, at Werner's, Friday evening, December 9.

This farewell supper given Mr. Lawrie was participated in by fourteen members, including Harry Lawrie, Oscar Enders, C. A. Kessell, J. H. Carpenter, O. C. Christain, W. B. Lord, H. W. Culbertson, F. L. Linden, F. O. Fraenkel, R. C. McLean, Robert B. Williamson, C. F. Jobson, E. J. Wagner, and R. E. Schmidt. The supper was a credit to the caterer, and thoroughly acceptable to the guests, judging by the speeches made and the general good-fellowship which held the latter around the table for several hours. The general theme in the response to toasts was regret at losing so active and valuable a president, mingled with hearty good wishes for his success in his new location. The regrets of the club were also divided with Mr. Enders, who leaves with Mr. Lawrie. Mr. Enders, while one of the youngest, is looked upon as one of the most promising members of the club. An indefatigable worker, accurate and rapid, his success as a draftsman and architect will be watched by the many friends he has made both in and out of the club, with interest and confidence.

Mr. Carpenter spoke at length of Mr. Lawrie's valuable services to the club. Mr. Lawrie, of the founding of the club through Mr. Carpenter's efforts, and the coöperation of *THE INLAND ARCHITECT*, these speakers being followed by Messrs. Enders, McLean, Kessell, Christain, and others. Mr. Lawrie presented his photograph, with his autograph, to each guest, as a memento of the evening.

ART STUDENTS' LEAGUE OF NEW YORK.

Professor Russell Sturgess kindly gave the members and students of the Art Students' League an interesting talk on bronzes on Saturday evening the fourth instant. The period covered was from the early Greek discoveries down to the later renaissance. The lecture was illustrated by stereopticon views and the Professor's complete collection of photographs.

BUFFALO SOCIETY OF ARCHITECTS.

At a meeting of the society it was decided to tender an informal reception to John W. Root and Sidney Smith, delegates to the American Institute, and R. C. McLean, of *THE INLAND ARCHITECT*, whom they invited to stop over at Buffalo on their way to attend the Institute convention at New York. At a dinner tendered these gentlemen were C. K. Porter, president, and W. W. Carlin, secretary, of the Buffalo society; Mrs. Louise Bethune, W. R. Waite, R. A. Bethune and others. The city hall and jail was inspected, and considerable time was spent viewing the Y. M. C. A. library building being erected by Cyrus L. W. Eidlitz, of New York. The armory building of the Seventy-fourth Battalion, designed by architects R. A. & L. Bethune, of Buffalo, was inspected under the most favorable circumstances, the occasion being a reception and dress parade tendered the county supervisors by the militia. The drill hall is about 220 by 120 feet, with a trussed roof spanning the entire space to outside walls; a spacious gallery at one end, and reception rooms opening from it, are one of the special features in the plan. Small drill rooms, company rooms, a rifle range, etc., complete the plan of one of the finest and most commodious armory buildings in the country. The acoustics were noticeably perfect, there being no perceptible echo to music or marching. The visitors continued their journey after two days' sojourn, having heartily enjoyed and appreciated the hospitality extended by the members of the Buffalo Society of Architects.

* This paper will be published in a future issue.

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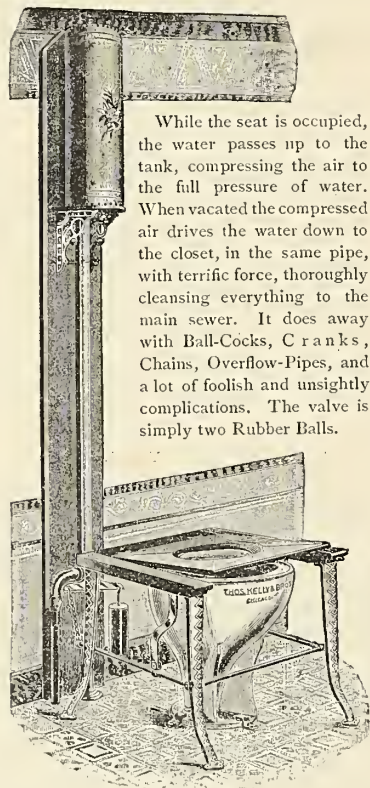
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FIG. 3.

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No. 10

JANUARY, 1887.

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EIGHT state associations hold their annual meetings during the month of January. The Architectural Association of Minnesota met at the West Hotel, Minneapolis, on the 4th, and the Nebraska State Association of Architects at Omaha on the 5th instant. The Missouri State Association of Architects will meet at the St. Louis, on Tuesday, the 11th instant. The programme outlined by this latter association, which is very important, is printed elsewhere, and the meeting should be attended by every member in the state. The Architectural Association of Iowa will meet at Des Moines on Wednesday, the 12th instant. In the third week of the month will occur the meeting of the Kansas State Association of Architects, at Topeka, on Tuesday, the 18th instant, and that of the Association of Texas Architects, at Austin, also on Tuesday, the 18th instant. The Association of Ohio Architects will meet at Cincinnati, on Thursday, the 20th, and have outlined a strong programme, which includes discussions on several important subjects. In the fourth week the first annual meeting of the Indiana State Association of Architects occurs at Indianapolis, on Thursday, the 27th instant. Every architect in regular practice in each state should make a special effort to attend his state meeting, and, if not already a member, should send in his name for acceptance. The state statutory law, formulated a year ago, will be discussed, and a committee will be placed in charge of looking toward its passage in each state of which the legislature meets this year.

IN the formation of state associations of architects in allegiance with the Western Association, the constitution and by-laws of the latter usually serve as a model. This is a good form, but a little variety is sometimes desirable, and as the preamble to the constitution of the "Société Académique d'Architecture," of Lyons, France, is admirably concise and complete, we commend it to our readers.

The objects of the Academic Society of Architecture, of Lyons, founded in 1830, are: To provide a bond of union among the architects of Lyons and vicinity. To extend to its members the aid necessary to protect their professional interests whenever it considers such to be for the general good. To conserve (*veiller à*) the dignity of the profession. To encourage those studies and investigations which contribute to the progress of architecture and the kindred sciences. To establish public competitions for the encouragement and reward of young architects, or draughtsmen, or mechanics employed in the building trades.

The Italian architects and civil engineers unite to form an association styled "Società degli Ingegneri e degli Architetti Italiani," with its headquarters at Rome. Its preamble will be interesting to our readers, in connection with that of the French architectural society, of Lyons, above.

The aims of this society are: To promote, by means of discussion and publication, the progress of the sciences relating to the constructive and decorative arts. To promote the study of technical questions of public utility. To guard the professional interests of engineers and architects. To provide, by gradual contributions, within the resources of the society, a fund for the aid of those members of over twenty years' standing who from inability to continue the exercise of their profession may be in need of assistance.

We do not suggest that the language of our state constitutions and by-laws could be bettered, but those of the foreign societies are certainly worthy of our consideration, and contain suggestions that are valuable.

BUILDERS are looking with considerable interest toward the convention of the master builders of the United States, which will be held at Boston, on the 10th, 11th and 12th instants, called for the purpose of forming a national association of the master builders of the United States. In response to a circular letter issued to the different builders and traders exchanges of the country, each association has appointed delegates, who will attend the meeting at Boston and report back to the several bodies they represent. From the general tenor of a circular recently issued by the Boston

master builders, it would seem that the object will be to secure a union of the master builders to procure a concerted action, especially in the opposition of the demands of unions among the building trades. If this be the object it will not, and certainly should not, prove a success. It will not because the interests of members in different parts of the country are so diverse that an aggressive policy would not be universally supported. It should not, because to oppose trades union by trades union will only lengthen and embitter the conflict now going on. The success which unions of every description have met with in the past few years, has been almost entirely due to the prosperity of the country; the first year of depression will do more than all the opposition and lockouts that can be instituted to show men that honest, hard work will advance them more than any union can.

BUT this meeting can result in great and permanent good if the formation of the national body is properly directed. Let the constitution and principles laid down be broad and liberal. Let the work outlined be in the direction of improvement in methods, looking into the statutory relations of the building trades to the capital they dispense for labor; into the condition of their workmen and their opportunities for perfecting themselves as workmen. These and a hundred and one other questions can be profitably discussed and acted upon. If this is the direction taken by this national association of master builders then it will succeed, and with judicious and conservative management will save the next generation in this country from what it is so clearly tending today, a generation of botch workmen. The skilled mechanic in the building trades is becoming more scarce each year. Those who are skillful are almost without exception of foreign birth and training. It lies largely with the master builders to correct this and aid the manual training schools to educate a generation of skilled workmen.

THE annual meeting of the Chicago Builders and Traders' Exchange, which occurs on the 17th instant, commences the fourth year of its existence. The prosperity of the exchange has been as phenomenal as that of the building interest which it represents, and it now has 498 members representing the leading contracting and building material firms of the city. At a recent meeting called to appoint a nominating committee to prepare a ticket for the coming election of officers, Mr. George C. Prussing stated that for business reasons it would be impossible for him to serve in any official capacity another year. This is to be regretted, as Mr. Prussing has been president of the exchange since its inception, and it has been largely to his energy and business ability that the organization of the exchange, and the power and influence it has since attained, are due. The Nominating Committee, composed of some of the strongest members of the exchange, have, however, selected for president, Mr. George Tapper, who is one of the best-known, and most skillful builders in the West, and would fill the office to the unanimous satisfaction of every member. They wisely retain the present secretary as, beside being universally popular, Mr. Schoenthaler's office is the business headquarters of the exchange, the details of which could not easily be transferred without detriment to the exchange, even if an equally popular member could be found to fill the office. Joseph Downey, who now occupies the office of treasurer, would prefer not to serve again, but has been prevailed upon to allow his name to be used on the ticket, and will, undoubtedly, be unanimously reelected. A plan for selecting a board

of directors that would be most satisfactory and popular, would be for each master association in the exchange to suggest one of their members to the Nominating Committee to serve on the directory. This would procure each interest a representation, and sustain the equality of each in the transaction of the affairs of the exchange. The Builders and Traders' Exchange of Chicago, though not as old as some others, has now the recognition of the entire building craft of the country, and the judicious management of their affairs will cause its power and influence to grow, not only as a benefit to its members, but to the city, the upbuilding of which they have in charge.

IN reviewing the paper presented at the Nashville meeting of the American Institute, by Mr. T. M. Clark, of Boston, at the more recent convention at New York, a decided diversity of opinion was observed in regard to the necessity or advisability of forming an architects' protective association. While the necessity for some such union of interests exists, the opinions presented against the scheme as outlined in the paper and subsequent committee's report, were well grounded. Especially true is the observation of Mr. Kendall that "architects should first learn to protect themselves against themselves before they sought protection against their clients." Still, since Mr. Clark knows whereof he speaks, and has gone into the matter with some earnestness, his plan should receive careful consideration and its possibilities and limitations be intelligently estimated.

THIS paper, however, so strongly points out to architects the unprotected condition of their practice and the general inability to recover their just dues through legal process that we would submit a plan which, if carried out, might result in general benefit. This is the employment of a lawyer by each state association to whom each member might apply for advice. The well-known ignorance of lawyers generally upon all questions regarding building laws and the lack of compiled rulings would suggest that if one lawyer in each state were paid to search for past decisions, become fully posted upon existing laws, etc., it would be of great benefit to the entire profession. A dollar or two tax upon each member would secure this, and the saving to architects would be great. In this way he could ascertain before entering suit his chances of success, and could be guided accordingly. Much unprofitable litigation would be saved, while the fact that the association had a prominent lawyer in its employ would lead clients to treat architects with greater justice. We would strongly advise that the subject be freely discussed at the annual meetings of state associations which occur this month.

WILLIAM PAUL GERHARD, the well-known sanitary engineer, who for some time past has occupied the editorial chair of *Building*, has resigned that position, and will devote his entire attention to his increasing practice. Mr. Wm. T. Comstock, the publisher, who will resume the editorial management of the paper, says:

We have long seen that his intelligence, thoroughness and honesty as a professional adviser must in time require the devotion of his whole time to his chosen calling, and while we regret to lose his valuable services in the conduct of *Building*, yet we are glad to be able to congratulate him on his professional success.

Mr. Gerhard, we are glad to announce, will, for the present, retain his position as special contributor to THE INLAND ARCHITECT. As a sanitary expert Mr. Gerhard has few equals, and no superiors, and while his work in the editorial chair was marked and of great benefit to the readers of *Building*, we agree with Mr. Comstock in his indorsement and congratulation upon his professional success.

Style.*

BY JOHN W. ROOT, ARCHITECT.

IS it not high time that the familiar architectural word "style" was relegated to its proper meaning? As now used it has almost ceased to have significance even for architects themselves, while to the public at large the word has become a delusion. How often the architect of the day is compelled to strain his conscience in answering the familiar question as to the style of his designs, because he feels the necessity of calling by some traditional name designs often as unconventional as a chattering chimpanzee. For practical purposes, such phrases as Grecian, Doric, or Roman, Ionic, or any other names of the traditional styles have become impertinent, and are used only for lack of better terms.

The word "style," as generally used by the public, has, on the contrary, with all its varied applications a very comprehensive significance, and is rarely misused or misunderstood, and to say that a woman, a dress, or a yacht has "style" is to convey an impression which is understood with moderate accuracy. Thus used the word carries a deeper meaning than mere adherence to given fashions, even if the latest, as in the case of many women who devote an energetic existence to the latest styles, who are never accused by anyone of having "style." This quality has a wider sweep; it lies far beyond the creative power of a Worth or a L'Archeveque. It is inherent—a thing of the head and heart, not of the epidermis. It shines out from beneath a beggar's rags; it reveals itself in the touch of an inexperienced pianist, in the "handling" of a green artist, in the lines of a thatched cottage. We find that among the work of architects it is present in one building and absent in another. Often it characterizes an architect's smaller buildings and is absent in those more important, or vice-versa. In the progress of a design it frequently happens that a preliminary study will be full of "style" and the final design have not a bit of it.

Now, this common word "style" is manifestly not of the same significance as that used in architecture,—as when we say that buildings are in the "Grecian Corinthian style," "the style of François Premier," or "the French Gothic style of the thirteenth century." With this special use of the word, each one of us is presumably familiar and what I wish for a moment is to call attention to "style" in its larger, fuller and more widely understood use.

And first let us note that as far as art is concerned, few created things have ever lived beyond the age of their creator that lacked this precise quality. Occasionally some titanic and monstrous mind will throw upon the world intellectual spawn which will live for ages because of the tremendous power and vitality which have been injected into it. But these phenomena are too infrequent to be worth discussing, and form only rare exceptions to a universal law.

Of all great art works which have come down to us, spared by the tooth of time, we confess now what was confessed in each age before us—they have "style." This, in spite of the fact that the architectural style may be one we despise. Pierre de la Vallée probably had no warm admiration for that Gothic style which is built in the apse of Notre Dame de Paris: Christopher Wren certainly cared little for the similar style of old St. Paul's or Westminster Abbey, or the later Gothic designs of Oxford which he so mutilated. But I do not doubt that both architects would have admitted the buildings which they did not admire had the kind of "style" we are discussing. Why was this? For a reason precisely similar to that which saves a gentleman of the old school from the ridicule of a gentleman of the new. You may feel that the manners of the *grande école* are out of key with our jaunty flippancy; but there can be no doubt that they fitted a different, and perhaps better mode than ours, and in all essential things, all things of the heart, the two gentlemen are as one.

Thus, although Notre Dame de Paris and the Hotel de Ville are two buildings of different ages, as widely apart in manner as St. Louis and Henry IV, you will note how alike they are in certain respects. See the noble gravity with which in them large matters are treated; the sweet repose of manner in every-day affairs, the airily graceful and fantastic touch which enlivens lighter subjects. From the noble sweep of the center door arch to the great griffins that from its tower tops grin out over Paris, Notre Dame has this fine, gentlemanlike style. There are no solecisms. Everything is fitting; temperate when most exuberant, contained when most severe.

What is this fine style? How did these architects get it? How is it that all over the world—where the gleaming domes of Taj-Mahal sleep in the white sunshine; where gray Pylons of Egypt inclose their depths of luminous shadow; where the pink Peutalic columns of the Parthenon lie scattered on the Acropolis, bleaching like the bones of a dead demigod; where the dim, echoing aisles of Chartres filter from the sky its most heavenly rapture to pour it on the humbled worshiper—how is it that everywhere men have fixed in stone and wood and glass this quality, so subtle, that to us it often seems the most refined essence of art?

Any competent answer to this question will necessarily touch upon a field of ethics not confined to architecture alone, nor even to the arts alone, but pertaining to humanity itself. The arts, architecture among them, have been called polite. Perhaps in the earlier stages of this politeness architecture takes precedence of all others. Painting and sculpture began their career with no distinct debt to humanity; but architecture was, at its birth, shouldered with a large obligation, which it was in decency compelled to pay. Every house built to shelter man from the elements was a thing not to be avoided by its neighbors. It not only partially shut out from them grass and trees, and sun and sky, but, by virtue of its very bigness and fixity, it became, whether a thing of beauty or not, a thing of prominence. This fact has made Mr. Garbett call architecture "the politeness of building."

Accepting this definition as sound, let us note some of the qualities

which we find in a gentleman, as we understand the term, and see if they are not equally applicable to good buildings. These are: Repose, Refinement, Self-containment, Sympathy, Discretion, Knowledge, Urbanity, Modesty.

REPOSE.

Quietness of body and mind; not phlegmatism, but enforced quietness, as in the poise of a gladiator. The mind becomes finely receptive when held in this calmness of attitude.

REFINEMENT.

In which all things tend toward the loss of asperity, not loss of power nor of value; gaining in that smoothness of surface, that crystallineness of composition which gives added currency and beauty to the thing refined.

SELF-CONTAINMENT.

Which avoids a too-ready utterance of the momentary thought; which spares other people a swift infliction of all of our knowledge; which inwardly debates before answering grave questions.

SYMPATHY.

Which "puts yourself in his place"; which readily accepts a point of view; which quickly adjusts itself to its environments; which gives gravity for gravity, lightness for lightness, tears for tears, laughter for laughter.

DISCRETION.

Which seeks always the fitting thing to do, thus supplementing sympathy; which holds its tongue when speech is unnecessary; which knows nothing when forgetfulness is a virtue.

KNOWLEDGE.

The care of speech; the loving selection of words; the scrupulous nicety of grammar, the fullness of idea and illustration that decorates each subject touched.

URBANITY.

As the name suggests, a quality begotten in cities; suavity; the faculty of avoiding friction; the knack of easily getting about in crowds of men; the attitude of deference to their weaknesses; the power, without creating offense, to ward off their aggression.

MODESTY.

Without which all other good qualities may become offensive. Not affected modesty; not Uriah-Heepness, but the genuine self-esteem which, in justly valuing self, puts as well a just value on others, and thus confesses that self is small in many comparisons.

Now, what are these qualities in men that they are not in buildings? Their sum total makes a perfect gentleman. The sum total of their analogues makes a perfect building. You may leave out several of them from a man's composition, and still leave him a very good fellow,—so from buildings a number of these elements may be omitted and still the design not be utterly damned.

Let us now proceed to apply these gentlemanlike qualities to a test of buildings.

First. As to repose. It seems at present heretic to say that it is the most essential of all qualities, but the fact remains that it is. The instinct of the world has grown to feel that all large things should be quiet or slow-moving, and that only little things like bees and butterflies may flutter. The world has also noted that all large things are soberly, even if richly colored, and that in form all of their lines tend to the expression of the quality of repose.

Since, therefore, buildings are the largest of human created things, a deviation in them from this universal law is the most elemental of mistakes, increasing in enormity as the building considered increases in size. Both in this and other respects many things may be pardoned to a little house, or one without public significance, which become unpardonable in a larger or more important building.

I am aware that you may summon as apparent witnesses against me many of the notable buildings of the world, but even in these I think a close study will show that the principle is sound, and is carried out. As a matter of fact, so general a law as this always has within it a lesser principle which determines the exact application of the law, and in this case the inner principle is simply this: "What sentiment is the building designed to convey? Is it the restless aspiration of the soul after God, as embodied in the medieval cathedral? Is it the expression of the power and stability of a great corporation, as expressed in its office building?" Evidently there must be very different treatments of the two classes of designs, but it seems equally evident that both designs must consider the outer and elemental law to as great extent as is consistent with the expression of purpose.

Practical applications of this law a little reflection will show us, and it is, therefore, worth while to mention but a few. Probably nothing about a design is more expressive in this respect than the management of roof or cornice lines. In a small house, or one which is greatly varied in plan so that each of its parts is small, a very broken and even restless outline may be good. But even in this case, there should be sufficient allowance of perfectly quiet and unrelieved background to fully offset its whimsical features. In large and important buildings, however, especially those built for commercial purposes, simple sky lines, I believe, experience will show to be best, as best conducive to the quality of repose,—and more than this, because a very broken sky line is apt to suggest multiplicity of subdivision or function, and should, therefore, be coincident with these subdivisions or functions. This in commercial buildings can rarely be the case.

The value of plain surfaces in every building is not to be overestimated. Strive for them, and when the fates place at your disposal a good, generous sweep of masonry, accept it frankly and thank God. If this goodly surface come at the corners of your building, so much the better; for there can be no better guaranty that the house will "stay where it was put" than the presence in it of masses of simple masonry at its angles.

* Paper read before the Chicago Architectural Sketch Club, January 3, 1887. Revised by the author for THE INLAND ARCHITECT.

As to repose in color, you will at once know all that can be said by me, and will sympathize with the utter condemnation of the use of sharply conflicting colors in a design for any structure of considerable size.

In general, our whims of all sorts, our fanciful vagaries, whether in color or form, may, perhaps, be safely put into small buildings, but if they go into large structures, they should be kept so well subordinated to the general mass, whose largeness and dignity should be expressive of not only sober thought, but of the gravity becoming all great things.

Refinement is a quality whose importance will be at once apparent. Of late years it has at times seemed obsolescent, but always in work which can never have permanent value.

More is signified by the word, as applied to architecture, than is usually fancied. It means not only the careful consideration of each detail in itself, but also the relation of each to its neighbors and to the whole. For what may be well enough in itself may be utterly vulgar in juxtaposition with other things.

By just what laws refinement in a building is reached, would be most difficult to state; but apart from that close study which is necessary for each good element in a design, the mysterious thing called "taste" is of vast importance here; and the acquisition and cultivation of this is a matter to be constantly followed. In this pursuit not only is it wise to familiarize oneself with confessedly great architectural examples, but with all great art work. As much may be learned of color from one great canvas of Paul Veronese as from all the books on the subject ever written, and the study of the contours of Greek vases will do more to cultivate a niceness of taste in outline than many profiles purely architectural.

More than all others, however, the human form must remain the supreme school for the study of form and proportion in its most refined and significant expression. Here, as all artists have insisted, the methods of nature have their fullest revelation. This is the divinest design for any structure; this is the most pregnant essay on the much vexed questions of Proportion and Scale; here is a perfect solution of the relation of exterior expression to interior arrangement and here is a demonstration of the fact that the utmost refinement may be combined to herculean strength. When fully expressed in architectural design, this refinement means all that it suggests in the human form itself. There is the same careful avoidance of useless features, the same perfect adjustment of each part to the function performed by it. Elephantine columns are not used to do the work of mice; necessary structural features are not emasculated by ornament too delicately wrought, purely decorative features are not so formed as to give a false suggestion of vital necessity.

Just as in the case of a man of the world, the refinement of a design will suggest itself through a thousand channels, sometimes through a direct appeal, sometimes through an indirect insinuation, sometimes through an effort to conceal some necessary weakness or misfortune so as to spare needless pain to the observer. In all cases the quality has the true ring when it springs from soundness of purpose—from the heartfelt desire to please; and it becomes false and hollow in men and in buildings whenever it is an affectation.

Let us glance at the next attribute of a man or building of "style," Self-Containment.

Whenever we meet a man who impresses us as burning with the wish to tell us all he knows, let him be as graceful in speech, as wide in knowledge, as polite in manner as may be, we feel that he lacks a most essential element of "style." So with a building. Nothing is more offensive than those verbose and overdone designs which are not only mere *tours de force*, but which suggest the anxiety of the architect to tell all that he knows in one design. Very successful buildings have the quality of temperance, of self-containment. Even in the most exuberant French or Flemish Gothic, the exuberance is a part of its age, and comes as a natural outgrowth from it. In good examples of these types there is no straining for effect, nor anything theatrical nor merely declamatory. There is always the feeling that, however much the architect may have chosen to say, he has neither exhausted himself nor his subject, but keeps in reserve a thousand strong images or quaint conceits for some future use.

In these days, when what we call "originality" is so much desired, self-containment is perhaps more difficult to attain than ever before. But we must learn it, distrusting the merit of any of our designs which have seemed labored to us, and in which effort has been made to express more than we have really well known, being assured that all over the building executed from such a design will be the painful traces of labor and sweat.

In the varied solutions possible to a problem, the true labor to be expended is in first determining which one is best, then evolving it, when it is found. The best solution will always be the simplest, and its full growth will follow with a directness and ease which suggest the budding of a flower rather than the forging of a columbiad.

Self-containment in the expression of a subject always means its thorough digestion. In conversation we may be pardoned if we occasionally think aloud, thus uttering many irrelevant or tentative things. Our buildings are much more serious things, for however much they may deserve oblivion, the fact that most of them remain standing after we are through with them prevents people from forgetting them. Every intemperate and hastily uttered thing about them remains to our discredit.

We may not all succeed in doing original work, but each of us can do well considered work, expressive of that self-containment which thinks first and speaks afterwards.

Sympathy, another quality necessary in the gentleman, is also necessary in a building, and this, of course, means an architect as well.

In each community there are certain tendencies of the people, certain peculiarities, full sympathy with which is essential to the successful designer. This is a point we are apt to neglect. Our work has too much of the transplanted look which comes from the absence of this active sentiment. Touched by the warmth and sunshine of an outgoing and vital sympathy, all styles of architecture become quickly acclimatized and characteristic. Yet it sometimes seems that one of our greatest efforts was to

prevent this acclimatization by rigorous insistence upon mere traditions, too tenaciously holding to the dry canons of mere architectural style. This is altogether a mistake. A great type in architecture, like that of the Parthenon, became great not only because of its perfection as a solution of a given problem, but because in a hundred small respects it expresses the immediate influence of essentially local conditions.

This variation, because of environment, always comes about of itself in time, and this, maybe, in spite of architects. No importation of Greek architects could save Roman work from swift differentiation from Greek work. Our attitude should therefore be one of readiness to accept and help forward the inevitable. By doing this we can insure that it will be the finer national characteristics, rather than the grosser, whose influence will be manifested.

Passing from this wider view, we must also note that sympathy is equally essential in considering the purpose of each building, and the idiosyncrasies of each owner. Many a most brilliant feature has been the outgrowth of what at first seemed in a client an idiotic whim; and many most successful buildings are so because they reveal on the part of the designer a point of view in warm sympathy with their intention. If the building is a warehouse, a dry-goods store, an office building, or a hotel, the true points of view in designing them will be largely determined by these various commercial considerations.

The architect occupies a position in this respect different from all other artists. He can never afford, even when the artistic expression of his design alone is considered, to neglect a single condition not only in the larger matters of climate, national characteristics, general purpose, etc., but also in matters apparently very trifling.

I am confident that an architect designs a better grocery store, if into his own professional view of the problem, he will admit in all possible fullness the grocer's view. More than for all other artists does success for the architect depend on the activity and warmth of these sympathies.

But sympathy is a very dangerous thing without discretion. Sympathy leads us onward; discretion pulls us back. Without discretion architecture is like a machine without a governor.

Many houses which might be named, and which you all have seen, suggest a clock in the act of striking twenty-four, or are like a locomotive driving-wheel whirling around on a slippery track. How many buildings do you know of in Chicago, against whose discretion no charge could be sustained? Of course, I do not mean the large class of tramp and bum houses which, if justice had her way, would always be in the lock-up, on charges of "drunk and disorderly." I refer rather to houses of avowed morals, who profess not to stay out nights, and in whose daily and nightly life the latch-key has no place. In even these professedly good houses, how many skeletons dangle from the cornice, perch on the roof, hover about the doorways or crouch at the basement. What we need now more than anything else is "proper" houses, whose real discretion is what it professes to be. What would you think of a man who would wear his religion in the band of his hat, and yet get drunk, and not care enough about it to go home in a cab? This is exactly like the indiscretion of our houses. They are always doing indiscreet things. Columns, roofs, gables, balconies, are all over them, each loudly swearing it is what it pretends to be; and yet a blind man could see there is not a word of truth in it. In their anxiety to induce belief by volubility of protest, many of them look as if the source of their design had been a firework pin-wheel, while some assert by their cumbersome features, by their heavy brows and wrinkled skins that they are great giants of houses, when you see they are only wretched little pigmies.

Seriously, discretion is our crying need—the doing of the right thing in the right place and time. What discretion have we, when we assume in the prevalent craze, that because a type of design is good for a house 100 feet wide and high, it is equally good for a dwelling 25 feet wide and 30 feet high? In other words, that the limbs of an elephant are good enough for a greyhound; or that nothing is so beautiful as the torso of the Medici Venus on the legs of the Farnese Hercules. This sort of thing is no more true in architecture than in any other art or in nature itself. As the fond mother said of her hopeful son's "swear word,"—"It's worse than immoral—it's ungentlemanly."

Nor is it true discretion to assume that even the same sort or scale of detail is equally good for all buildings. We don't sing Schubert's "Lorlei" on the floor of the board of trade, nor shout the price of grain in our music rooms. And yet, we spend a wealth of delicate ornament on our down town houses, and build our dwellings like Stonehenge.

Now, it would seem that ordinary discretion would teach us that the relation between our dwellings and our trade palaces is the relation between an orchestra and a brass band. Whatever is to be spoken in a commercial building must be strongly and directly said. The very style of the ornament should be simple enough, and the scale large enough to be easily comprehended. If not, if the unseeing eyes of busy men are daily saluted by delicate details, not only are the details wasted, but they become so far vulgarized that it becomes impotent to produce pleasure even when men have in their houses leisure to contemplate it. In the exercise of this discretion, let us not only consider each thing our building will express, making sure that the thing be rightly placed and properly expressed, and that it be well adjusted to the mood of the spectator; not lowered down to his plane; but, although above the sordidness of his daily thought sufficiently in recognition of it to escape total neglect.

Our architecture will never live beyond our own lives until it loses much of its hap-hazard, hit or-miss indiscretion.

Knowledge is one thing which, if essential, is also obtainable; genius is beyond most of us; knowledge is accessible to all of us; so that in this age of light, ignorance has become a crime. Occasionally we hear a certain kind of man deliver himself something after this fashion: "Knowledge is all very well if a man don't know too much." Then he'll cite instances of college men who are starving on ten dollars a week, and men who, like himself, had no education, "climbing to the top of the ladder." This sort of talk means nothing. Granting, for the moment, the point that starvation of the body is worse than starvation of the mind—that not to

know mental hunger is to be well fed—it remains true that the college man is not necessarily better educated than his more successful critic. There are many men to whom ideas come freely and graphically through things, and with slowness and dimness through books. Viewed from what point you will, every man is distinctly the gainer by acquiring knowledge, and no man more than the architect. Every building bears the impress of the knowledge or ignorance of its designer, not of necessity in any one of its details, or even in the composition and adjustment of them all, but certainly in the subtle thing which we call "style." The profounder the knowledge, the fuller and richer the result.

To know not only that architects of a certain age designed buildings after a certain fashion, and, adapted in certain styles, the various details of these buildings are valuable, but how much more valuable to know the causes which lay back of these results. The mere facts, though significant, are bald and unproductive without their antecedent causes. To have fully mastered these causes is to be able to produce results analogous to those first produced—not in the dry and formal manner of the mere copyist, but with the fire and force of the original. No period of college or school training can do more for the architect than beget in him the sacred thirst of knowledge, which it should be his life work to gratify. Apart from the pleasure to be derived from consciousness of this knowledge, is the certainty that every design he makes will bear the impress of it. It may be in the selection of means to ends, it may be indicated only in certain turns of profiles, in certain delicate adjustments of parts, where a different treatment would have been only less good—it may be in still remoter ways, but everywhere is shown the grasp, the copiousness of thought, the richness of apt illustration, born only of full knowledge. Just as in a critical essay by Matthew Arnold or James Russell Lowell, every sentence reveals the wealth of knowledge that lies back of it, so plainly does the architect reveal himself in his work.

In the absorbing cares of an active life, those forms of knowledge whose bearing seems immediate, or as we say, "practical," will be most naturally acquired, but it is a misfortune to any architect, and an appreciable loss to his work when he ceases to acquire that form of professional knowledge which is entirely literary, and which may be related to his profession only by some side light shed from another art, which architecture may borrow. The so-called "practical" architect, who knows nothing of his art but what has been grafted into him by the surgery of dry practice, is passing away. Large and acute minds there are, in whose work you see the result of ripe wisdom and nice taste acquired by long experience and observation alone. These are not the men, however, who will deride that wideness of knowledge which is here commended. They are rather men who will point us to their earlier work as monuments, not to their glory, but perhaps to their shame or misfortune, and warn us to push with all vehemence our acquisition of the knowledge thus early denied to them.

Do what we may, our profession is rich enough for us to range and feed in during all our probable lives, without ever getting into our stomachs the indigestible food of "mere theory."

Urbanity is the next phase of politeness to which your attention is called.

If sympathy is a fellow feeling, urbanity is the expression of readiness to extend sympathy even before it be asked. Time was when urbanity in a house was as unsuitable as a silk cap in a jousting tournament. The house was a castle, its owner its warrior defendant, and everybody outside it possible besiegers. But with the dawn of day after the long, dark, feudal night, the dwelling opened outward like a rose in the sun. Men like Jaques Cœur of Bruges, built houses in which they delighted to express to all who passed the new-found peace and friendliness. In such houses was the frankest avowal of good fortune, the most charming confession of a desire to please. So that these newly blossomed dwellings have the native charm of a lovely deputation who delights that others shall admire her duty.

Is not this the typical attitude of the nineteenth century dwelling? Certainly no menace threatens our houses which stone walls can ward off. The brigand of today gains access wherever he can enter. We certainly do not generally build our houses among people we don't speak to. Whence, therefore, the sudden growth among us of medieval castles, whose only lacking detail is a shriveled head thrust over the cornice on the end of a pike. Are we so badly put to it for ideas that we must not only borrow from the eleventh century, but add to the medievalism of it? Surely if this sort of thing was good when men went about in steel, sword in hand, it is not good when men wear silk hats and smoke cigarettes. We may be aristocrats by instinct, but need we write over our doors, "*Odi profanum vulgus et arceo*?" In other words, should not our houses follow our personal example, if we be gentlemen, and doff their hats to their neighbors?

If my business hours I may perhaps be pardoned if I am sometimes brusque, and hence my business house may follow me in the expression of this. But am I equally pardonable if my churlishness is not only carried into my house, but is thrust upon the street, greeting my neighbors who pass by, in the stone walls of my house? Not so; the courtesy I expect I should extend, and the house in which I live should plainly say to those who can less escape the daily sight of it than of me, "Here lives a gentleman."

This means nothing of extravagance of ornament nor lavish outlay of money nor vulgar solicitation of notice. It is beyond and above these, and rather scorns than courts them. It is simple urbanity. It is the natural grace of a graceful society, to which every man in it owes allegiance.

And this allegiance suggests the last subject which we may consider—Modesty.

What man so great as to escape its obligation—what building? Today we expend our labor upon some carefully considered design. It is carried out and becomes, what we and perhaps the world calls our masterpiece. This last creation, emanating from our highest powers, furnishes to some stronger contemporary just the suggestion he may have lacked, and forthwith our masterpiece is eclipsed, and no one is the wiser as to

how it came about. Our work once done becomes the world's property, and is judged not by the impression of the moment but by criticism matured through long time—criticism in which we often become witnesses against ourselves.

The self-assertion of a man or of a design has in this calmly pronounced criticism no chance for favor nor for fame. All its cheapness and all its arrogance are revealed, and at last it stands forth a bragging humbug. Look at the splendid architecture of the second empire in France. Men of great talent created it. Millions were spent upon it. Why did it fall short of enduring fame? It is not modest, it protests too much; it claims too much. It has the cheap bluster of a hired bravo, and the false beauty of the street cocotte. We must learn to suspect in our designs all that directly demands admiration as its right. Ours should rather be the ambition to erect buildings which are by observers said to "grow upon one." Not all of the buildings which, instantly upon their completion, have carried the world by storm, have held their place in the world's esteem. Most of them have, in spite of pride and self-assertion, fallen to their proper level. Fustian is always ephemeral, and brag is no more permanently effective in stone than in words.

All that has been said, all that might be said, only brings us back to well-known principles, and we find at the last that the summits of a great profession are achieved only by a persistent course and hard climbing; by self-denial and steady self-analysis; by wide and catholic views and finely-tempered taste. But we may be sure that our work will never rise higher than its source; that no great creation comes from a small man.

Such qualities as we have considered do not get into the building except through its architect; so we see that a gentleman among buildings means a gentleman among architects. Remember it was not Michael Angelo who did the talebearing or indulged in the loud recrimination when St. Peter's was building.

Our Illustrations.

Residence for S. S. Kurtz, at Canton, Ohio, by Guy Tilden, architect, Canton, Ohio; cost \$6,500.

Trinity Episcopal Church, Kansas City, Mo., by Burling & Whitehouse, architects, Chicago. The superstructure will be built of rock-faced stone, the lantern of brick and terra-cotta, tile roof; cost about \$75,000.

Cottage for Mr. F. Shearburn, at Normal Park, Ill., by Irving K. Pond, architect, Chicago. It contains reception hall, seven rooms, closets, pantry, bathroom, etc. Finished in pine; staircase in oak. Contract price, \$2,410, exclusive of mantels and grates.

Rialto office building, Chicago, by Burnham & Root, architects. Illustrated from photograph by Hesler, by Ives' process. The building is built of St. Louis pressed brick and terra-cotta, with trimming of Missouri granite. It covers 146 by 175 feet, is nine stories in height, and cost about \$650,000.

House for W. Zimmerman, South Park, Ill., by Flanders & Zimmerman, architects, Chicago, two stories high, attic and basement partly finished. Inside woodwork of pine, except hall of oak, all in natural finish. The exterior is shingled all over, stained a Sienna color, with creosote stain, basement of stone, outside walls have a double air space as shown, making a non-conductor against heat and cold, and taking away the look of "thinness" so common to the wooden house; cost, \$3,500.

Flats for the Armour Mission, Chicago; Patton & Fisher, architects, Chicago. These flats are built by Mr. Philip D. Armour, to provide a permanent income for the maintenance of the Armour Mission. They are situated on the corner of Third-third and Dearborn streets, adjoining the mission building. The Third-third street block has a frontage of 122 feet, and the Dearborn street block, of 242 feet. There are forty-five flats in the two blocks, and the total cost will be about \$110,000. The exterior is faced with mottled Marquette sandstone, pressed brick and terra cotta. The interior finish is of oak in the stairway halls, and of Georgia pine with cypress doors throughout all the flats. The buildings will be ready for occupants on the 1st of May.

At a meeting of the real estate managers of the Cincinnati Chamber of Commerce, on the 7th instant, Mr. Joseph Kinsey was invited to make a statement for the Cincinnati builders who proposed to do the work upon the new building in marble instead of granite. In the statement which was received, Mr. Kinsey reviewed the question, the main point being as follows:

In the reading of the bids opened and read by Mr. Urner, chairman of the real estate managers, he omitted to read in full that of Mr. Norcross for the reason that it was confused and defective in the part which we are seeking to rectify, as it vitally involves the proposition to build the walls of the new chamber of beautiful white and mottled marble.

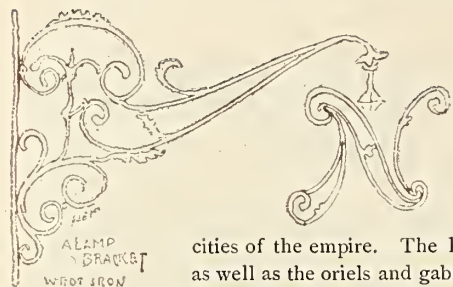
Whether this was intended or not by the bidder, we cannot say, but do assert that it so confused the committee that they did not take into consideration at all the fact that the marble men had made a rebate in the price of their stone that would have made the marble lower than the granite bid of Mr. Norcross, which was to finish the entire building for \$524,000, of Massachusetts granite, while his bid to build of Georgia marble was \$544,000.

A bill by John Boyle was attached which, in substance, agreed to complete the building of Georgia marble, except carving and sidewalks, for \$519,000. The prime considerations claimed in favor of constructing this new building of Georgia marble are: *First*. Its superiority to granite in beauty and durability. It is heavier and harder, and one of the most beautiful stones in the United States. *Second*. Its contiguity to Cincinnati. It is near by, comparatively speaking, and convenient to a great trunk line of transportation. It belongs to territory which is in close relationship to this city. *Third*. The quarries are practically upon that line of railroad—the Cincinnati Southern—in which our taxpayers are interested to the extent of \$25,000,000, and in giving it business to do we are assisting ourselves to meet our honest debts. *Fourth*. As the Southern railroad was built for the purpose of enabling us to exchange our merchandise for the raw material of the South, we should omit nor reasonable opportunity to respond to this purpose.

European Sketches.

PART X.—NUREMBERG.

BY IRVING K. FOND.



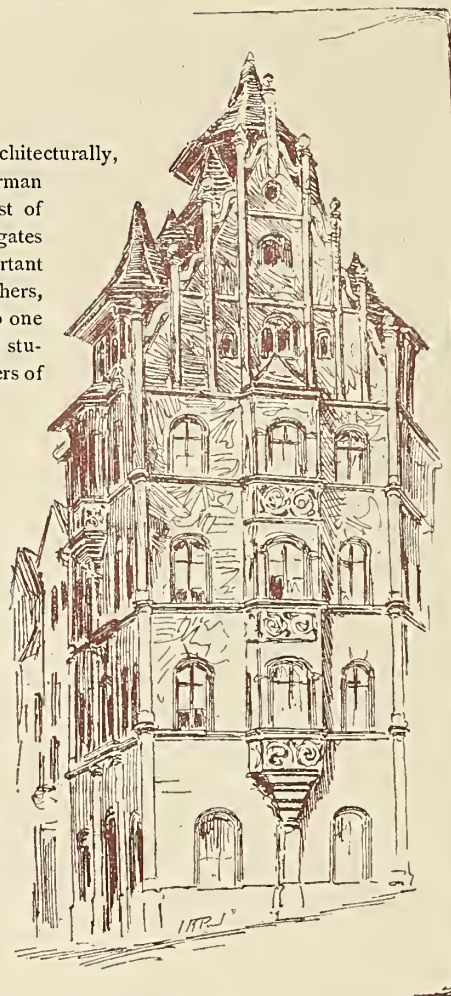
NUREMBERG enjoys the distinction of being, architecturally, the most picturesque and interesting city of the German Empire. It is with a feeling of relief and almost of home-coming, that the romantic traveler enters its gates after a season of sojourn in other large and important cities of the empire. The honest, homely faces and common clothes of the burghers, as well as the oriels and gables and dormers of the houses, are an intense relief to one coming from Munich, for example, where the ugly, scarred faces of the duelling students, and the hideously distorted forms of the tastelessly dressed officers and privates, especially officers of the Bavarian corps, and cold, resurrected forms of dead Greek art inflict themselves on the observer at every point. There are, to be sure, some gratifying evidences of original thought, and some picturesque work of the past, in Munich; but it is overpowered by the monstrous (in the sense of huge) imitations of the work of Greek and Roman. Nuremberg would tend to give a devotee of classicism troubled dreams—perchance a nightmare, were he compelled to rest, or rather, to remain within its gates from dusk till dawn,—a nightmare which could hardly be dissipated even by the simple straightforward lines and masses of the great castle seated so solidly above the choppy sea of red roofs. To the classic dreamer, these roofs, and dormers, and gables enclosed by the great, strong walls, must seem a pent up sea of warring elements; but to the romantic dreamer, how delightful the sensation of falling and of being swept up again, from dormer to balcony—from oriel to tower! Here and there, though rarely, are seen forms dear to classic eyes, but applied in a manner which would seem to out rococo old rococo himself; and everywhere is manifested that spirit of freedom and boldness which made Nuremberg, at the time of its independence, the leading commercial city of south-eastern Europe.

What is particularly noteworthy is, that all buildings, public and private, from the greatest to the least, bear evidence of this free spirit—this true artistic spirit. How could it well be otherwise? Where cobblers are poets, must not workshops be studios? Compare the classic ruins of Rome with the vital remains of romantic Nuremberg, and you will readily appreciate the difference between the cobbler poet singing sonnets of love to the fair lady, blushing behind the richly-carved oriel, and the Roman cobbler, whose occupation outside his shop was that of leading men about the streets, to wear out their shoes, that he might get him-

self into more work! Perhaps it were better to compare the nature and acts of the cobblers, and from them draw conclusions as to the architecture, for men make architecture, and not architecture, men.

But, to particularize further as to Nuremberg architecture. While the churches of Nuremberg were rich in art treasures, and quaint and picturesque to a high degree, they form but in small part the attractions of the city, and do not draw the attention of the student from the private and domestic work. The architectural treatment of the courts of many of the private houses displays the same originality and individuality as is shown upon the exteriors. Often the court is very elaborately treated, while the street façade shows a restraint, and presents, in the lower story, walls of almost Florentine massiveness and severity. The roofs are either pointed, with long, unbroken hips, or are immense, strong gabled affairs, with simple, straight ridges, and broad, plain surfaces, broken as use or fancy may dictate, sometimes by small and simple, and sometimes by huge, curiously shaped dormers. The hips and gables are buttressed by larger or smaller towers, with roofs of fantastic form. Now and then the roofs, getting a good start, are hardly able to restrain their skyward tendency, and it takes a large-sized sketch-book to contain on one page both eave and ridge. A sketch of one of these roofs, with its tier upon tier of simple dormers, is very like a continuous story in a monthly magazine: you begin to go on—and on—and it seems as if the climax never would be reached.

The walls were generally treated in stone. Brick, however, appears, and very effectively, in gables and in the upper portions of the towers. Heavy open timber framing occurs in upper stories and gables, brick and stucco being the materials for filling in. The general use of the oriel window in houses of every style, is one of the very noticeable features. These windows are treated generally as the principal feature of the façade, and run often from the first story to the roof,—as a rule, terminating under the eaves,—though sometimes they continue above, and are capped by dormers. Where oriels are not the principal features, broad, elaborately carved overhanging balconies furnish the relief; while often, as is the case in the *Nassaur Haus*, the wide-spreading eaves roof a long, shady loggia, which finishes at either end in a projecting bay,



capped by a spire-like roof. It may be said, with a fairly close approximation to the truth, that the variety of dormers is limited only by the number of buildings. Certain it is that no two prominent gable ends have received the same treatment. But, however varied may be the form and size of these dormers and gables, it is in the rarest instances that they interfere with the strong lines of the main roof. They may seem to do so, but a point of sight is always available when all lines will melt into harmony.

The castle, with its massive towers, and its great, sober roof broken only occasionally with little peek-holes, exercises a quieting influence on the more restless roofs below. The castle commands a magnificent view over the town and surrounding country, and is, itself, a prominent mark in the landscape. Long ago, the jolly Pegnitz sighted the castle from afar, and wandered down the valley towards the quaint town at its base. The inquisitive stream found its way under the walls, and rambled carelessly and crookedly along behind some buildings and before others, and imparted a decidedly Dutch flavor to the scene, at many points of its course. Curious broad arched stone bridges were thrown over the stream, and these were flanked with heavy towers, which were intended probably to keep them in place should the stream become restless or boisterous with

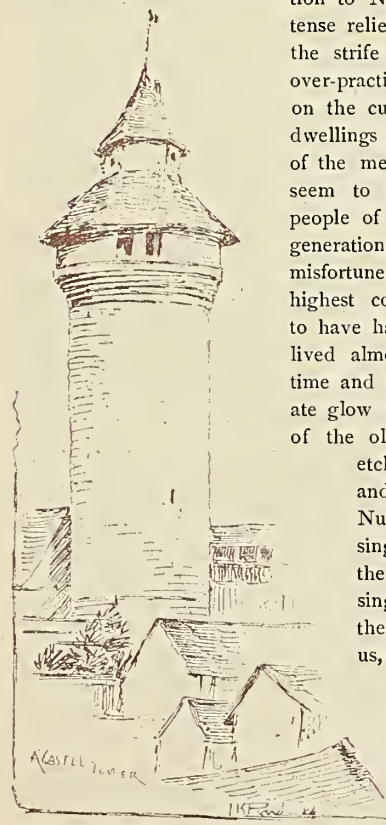
new drink. These bridges, so varied and characteristic in design, are almost as attractive as the churches, and like bridges in all cities where bridges are a feature, are an excellent point for observing the forms and features and peculiarities of the human beings who move in surging masses to and fro across them. The towers which guard the river bridges have brothers, larger and more massive, stationed on the city walls, to guard against agencies more envious and destructive than the river, and they have been less successful. For Nuremberg's story has been pretty much the story of all the highly prosperous mediæval towns; at first there was servitude, then freedom, the reward of noble duty done—then financial prosperity, then external envy and internal pride

and jealousy—then strife within and without—then defeat and decay. It is parallel with the history of the arts—it is the story of over-prosperous individual human life. But Nuremberg, from the very strength of character of its builders, remains distinct and self-reliant today, when many another rival town has vanished; for, although robbed of freedom and of commercial power by more potent rivals, or by a potent confederation of rivals, the quaint city maintains a respectable amount of vitality,

both in art and culture and matters of industry. Polytechnic and academic schools flourish, the manufacture of smaller articles requiring a high degree of skill and taste develop rather than abate, while the workers in wrought iron and metals and bronze are among the first in Europe today. And as to art,—every public building, from the castle to the beautifully cloistered Carthusian convent is a veritable storehouse of art.

So we gladly accord in the sentiment which has granted distinction to Nuremberg, for it is with intense relief that we turn away from the strife and vain struggle of this over-practical today, and rest our eyes on the curious old walls, towers and dwellings which echo with the songs of the merry poets and artists who seem to have lived only to make people of their own, and of future generations, merry and careless of misfortune; who in the days of highest commercial prosperity, seem to have had high ideals, and to have lived almost ideal lives. Of course, time and traditions have cast a roseate glow over the lives and doings of the old cobbler-poets, carpenter-etchers and painter-architects, and we now know the ancient Nurembergers as we see them singing and swaggering through the operas—the poetic Meister-singers; but, beyond all that, their work remains and tells us, strongly and clearly, as strongly

and clearly as stone can tell, that they had ideals,—and not the least of these was, to spread happiness and content around them.



Architectural Ironwork.

BY C. W. TROWBRIDGE.

STRUCTURAL CAST-IRON WORK—CONTINUED.

Continued from Vol. VIII, No. 5.

TO return to our column molds: After smoothing the facing, the core is set. This is sometimes made the whole length in one piece, sometimes in two lengths, jointed in the center. This core is supported from the bottom on little round iron rods, say $\frac{1}{4}$ or $\frac{3}{8}$ inch diameter with plates, say $1\frac{1}{2}$ to 2 inches square on top. These run down through the sand to the bottom board and hold the core up to its proper place. They are called chaplets. The chaplets for the top are usually made very much heavier than those for the bottom, say for 1 inch metal $\frac{1}{2}$ or $\frac{5}{8}$ inch diameter, for 2 or 3 inch metal $\frac{3}{4}$ to 1 inch diameter, according to the size of the core. Cores weigh about 110 to 120 pounds per cubic foot, and when submerged in iron every cubic foot of core lifts with the force of 330 to 340 pounds. This the chaplets have to hold down, notwithstanding they pass through a fluid metal and consequently get almost white hot. This is one reason why columns of very thick metal are unsatisfactory to cast, and often come out with cores shifted, or more metal on one side than the other, the chaplets having buckled before the iron got hard. Chaplets also give trouble if the metal is extremely thin and don't hold the chaplet firm enough to chip off good. Whenever you see a crooked column you can generally calculate that the top chaplets didn't do their duty, and that the core has risen up, making the metal thinner on one side than on the other. This is one of the most serious defects to which columns are subjected, and causes greater loss of strength than any other. Where these top chaplets pass up through the iron, there is very apt to be little blow holes surrounding the chaplets. Any moisture or rust on the chaplets assist in making gas to fill out these cavities. Often the sand is hollowed out, forming bosses, say, two inches in diameter, and one inch high around the chaplet. These are chipped off after the casting is cold, and generally contain all the blow holes, leaving the column sound. I have known superintendents want to reject columns on account of these chaplets, saying there was a hole and it had been plugged up with wrought-iron, and that they were not green enough to let a contractor run a plugged column off on them. Not much, you had better take that column away.

As these chaplets have so much work to do they are securely braced at the top. This is usually done by an iron bar and thumbscrew, or wedges between the chaplets and the crossbar. I have known molders to screw chaplets down so hard as to break the core. That is a sign by which you can tell what molders to discharge when dull times come. The pouring gates are usually made near the end, three or four inches from the pattern, and runners cut from the bottom of the pouring gate to the mold. Sometimes if the cope is thick, and the iron has to fall a considerable distance, a piece of core is bedded in for the iron to fall on at the bottom of the pouring gate to prevent tearing up of the sand and carrying some of it into the mold. When the cope is put back on, clamps are placed at short intervals along each side to hold it down. These clamps, running from the top of the chaplet bars to the under side of the bottom board, are either wedged or drawn up with screws. Pouring a mold is something you have all seen in foundries, and know what an interesting sight it is at night, and what handsome fireworks you see if a little iron gets poured on to a cold floor. There is a serious defect in one class of casting caused by wrong pouring, which I will mention right here. I refer to the square panel-faced mullions and columns with projecting bases and caps that are used in so many of our buildings. Generally these are cast face up. As the iron fills the mold, it flows steadily up the sides until it reaches the top of the core, when it flows over into the panel and the face of the center part of the column between caps and bases. As the rate of the flow of metal into the molds is regular, it takes some time to fill the panels and space of the center part; meanwhile the iron at the sides of the cap and base has been standing still at a level, the same as that of the center part of the column. As the core and mold is cold, a skin will form across at the surface of these places. When the center part is full the iron rises suddenly and fills bases and caps. This skin is apt to stay where it has formed, and the iron flow over on top of it, making a seam, sometimes a crack on that line running along each side of the base and cap. The remedy for this is to keep the iron in motion at these points. This can usually be accomplished at one end, by arranging the pouring gates so that iron flowing in them runs past these places, but at the other end, unless two ladles are used, and some iron put in there also, at the right time, a seam is very apt to show.

As soon as the iron goes into a mold the gas begins to run out. The sea-coal facing and moisture in the sand all become gas, passing out of all the joints in the flask, and out at the top through numerous vent holes made by perforating the cope with a wire before the pattern is taken out. The gas is lighted at once, and burns strongly for some time. Cooling off usually takes till morning of the next day, and my opinion is that it is much better to design your casting so that it can stay in the sand to cool.

Some castings have to be uncovered so one part will cool quicker than the rest to prevent their becoming crooked. This necessitates skill and judgment on the part of the molder to get it uncovered just right. Much more uniform results can be obtained by having your castings even enough thickness to balance right when cooled in the sand of the flask.

I will quote here from an article I wrote for the Union Foundry Handbook:

So many disturbing elements intervene between the conception of a design in cast-iron and the completion of the work in the building, that we all have to allow what we call a factor of safety (aptly characterized by the late Alexander L. Holly, C. E., as a factor of ignorance) to cover these contingencies, varying from three or one-third the breaking strain in very simple cases where the quality of the castings can be depended upon, to five, or even ten, where the design is more intricate or the liability to shrinkage strains, hidden defects in the castings, rough bearing surfaces or uncertain variations of the load are possible. Much can be done by designers of cast-

iron work to reduce this factor of safety, and, consequently, the weight and cost of castings, by giving serious consideration to the many processes through which their designs pass on the road to the building. Foundrymen exercise great ingenuity in producing any design in iron that may be presented to them; still it is possible to design things that are totally impracticable in cast-iron, in which case the designer would probably be asked to modify his drawing; but when it is possible to carry out a design without change, it is the almost universal practice to do so without comment and without recollection of the fact that the resulting castings may have very serious shrinkage strains or other defects which would reduce the strength far below what the designer expected. For instance, a column, say 16 feet long, 8 inches in diameter, $\frac{3}{4}$ inch metal, is sometimes designed with a heavy projecting base molding near the bottom, say 12 or 14 inches in diameter, giving 3 inches or more thickness to the metal at that point, also having an extension of the shaft to pass down through a shell plinth or pedestal, while at the top there is a shell cap and then a shelf, say 12 by 24 inches, drawn 3 inches thick, to insure strength without the use of brackets or ribs. When we consider the strength of mold necessary to stand the wash and pressure of the iron poured in, we appreciate that the sand must be firm.

Now, realize that the pattern for this 16 foot column is made 16 feet 2 inches, to allow for shrinkage; also remember that when this shrinkage occurs something has got to give. The shaft of your column being only $\frac{3}{4}$ of an inch thick, will solidify and commence to shrink, while the metal in your heavy base molding and the shelf at the top is still fluid, and a little metal will run out into the body of the column as it draws away in cooling, leaving a little vacancy or depression in the upper part of the shelf or base. Presently these heavy parts will become about the consistency of cheese, but the shaft of the column keeps on cooling and getting shorter. Now the situation becomes serious. The soft metal in the base and shaft is not solid enough to allow the column to draw them bodily through the sand mold, so they stay where they are and the column shrinks away, stretching out more of the soft metal after it, making a weak place or leaving a nice little crack, and, in an extreme case, pulling away so much that the head will drop off when the column is hoisted out of the mold. Then the foundryman looks wisely at the column and says, "Now I will fix you," and puts a fillet around below the shelf, or a bracket which will cool quickly and help pull, chipping out the bracket when the column is cold. In case all these fail, he just lays in some cold pieces of pig-iron before closing the mold, and they cool the heavy places off rapidly and everything is lovely. This last makes the soundest job in the lot, as they all melt down together; still there is liable to be dirt on the surface and shrinkage strains that would not be there if the designer had made his metal in the shelf only one and one-quarter or one and one-half times as thick as the shaft, put in some strengthening ribs or brackets, and had also made his whole base shell, except a small bead or fillet, thereby justifying a smaller factor of safety and allowing all parts to cool at the same time. Mullion columns are often designed with a heavy square face cored out, which stands in front of the wood frames, while a thin web runs back between the sash weight boxes. This is an exceedingly hard shape to cast without shrinkage strains. The cored part in front only radiates heat from one side (the core being quickly heated through), while the webbed back runs away off toward the remote parts of the mold, giving off heat on both sides, and the extreme back edge radiates in all directions but one, thereby cooling much faster than the front part, so that when the back has attained its length for normal temperature, the front is still red-hot and much longer. When the front cools there results a strain, which gives this column all it can do to hang together until it gets into the building, without doing its full share of work after getting there. Moral: A good liberal factor of safety or a nice large rib of metal, round or square, on the back of the web to keep it from cooling too fast. The privilege of modifying the thickness of parts of castings to avoid shrinkage strains is one that a designer can safely give a foundryman, for it is always cheaper to make castings right than wrong to commence with. Unequal cooling and consequent crookedness of shell pilaster faces, frieze plates and light ornamental work is usually corrected by the foundryman without asking the designer's permission, as it is utterly impossible to get light work straight without providing for equal and uniform cooling. But in the manufacture of thicker pieces and parts intended to sustain loads of any kind, the foundryman never makes changes or asks permission to change if he can possibly execute the work as per drawings received. Generally speaking, a more intimate association between designers and executors of cast-iron would result in a great saving of metal and a reduction of the factors of safety. Imperfect and unsound castings, owing to carelessness in the manufacturing, are much more rare than is generally supposed. Cold shuts, from pouring the metal too cold, honeycomb, dirt and scabs from soft or unclean molds, are quite rare, and never dangerous in the work of reputable foundries. Many more bad castings are made through an honest endeavor to carry out a design which is not positively the best thing possible for the place, than from carelessness in the execution of the work.

Among the most noticeable indications of shrinkage strains in finished castings is crookedness. One side will be shorter, thereby giving the whole piece a crook, or in the case of wide plates, they sometimes appear with the center perfectly straight and both edges "loose," or apparently too long for the center. The same may be said of the thin back ribs sometimes put on mullion columns. This comes from the apparently long parts cooling first, so that when the heavier parts cool afterward the light parts are left too long for their places, while the loss of strength incident to these causes is usually provided for by the enormous factors of safety used. Still, if designers would examine their castings carefully, they would soon be able to design forms not liable to these defects, and reduce their factors of safety accordingly.

(To be continued.)

A LARGE shipment of corrugated iron, siding and packed standing seam roofing has just been consigned to Jerusalem, Palestine, Asia, by the Cincinnati Corrugating Company, of Cincinnati.

Building Stones.*

BY WILLIAM B. LORD.

THE busy people of this world, with but few exceptions, are too much occupied in the various channels through which an existence or competence is gained to give particular attention to industries foreign to those which demand their thought and time. Occasionally a fortune-favored individual desires a home, or a syndicate concludes to erect a structure; then architecture and its kindred branches are required to aid in consummating their wishes. The walls of the building are among the first and most important considerations, and a source of reliable information upon the material presented for use should be within ready access of those who are interested.

The duty of furnishing this information falls upon the geologist, and it is a wonder to me, how they gain much information when they have been compelled to pursue their investigations under such (financial) discouragements, often receiving a salary that a first-class bookkeeper would decline, and a meager limit for publishing their reports. Attachment to their profession has been their only incentive to search for the hidden treasures of nature. For our consideration I have undertaken the task of collecting this scattered information, and endeavored to place it in such a simple form as to readily enable an interested person to intelligently study the interesting and valuable subject of building stones.

The science of geology is founded on such simple observations as running of water, rippling of waves, blowing of winds, shining of the sun, cooling of heated matter, growth and death of animal life and vegetation. These every-day operations have given the earth its external aspect and left their history in the rocks. We interrogate the facts which surround us and find them able to narrate a history.

Science authorizes us to say that our earth was first created as an igneous vapor. Cooling and condensation transformed it into a molten mass, and a solid film was formed over this molten sea. All of the water which now forms the sea and the rivers, and saturates the soil and atmosphere, then rested upon the earth as an arid, elastic, invisible vapor, extending an unknown distance into space. The same agency, cold and condensation, gradually caused this vapor to thicken and fall as rain.

The tumultuous waters, chemical affinity, and other agencies, destroyed portions of the rocks already formed, scattering the debris over the ocean bed in horizontal layers. The rocks thus deposited in the bottom of the ocean incorporated the remains of earlier life, such as shells, plants, fossils, etc., and were subsequently raised to the level of dry land. These rocks are called stratified to distinguish them from the earliest igneous rocks, which are not stratified. The lowest sedimentary rocks are locally so changed by contact with escaping gases and molten material as to essentially alter their usual character. Limestones are converted into marbles, sandstones into quartzites, clays and shales into slate, while many of the earliest are changed by chemical transformation among their elements into schists; and even gneiss, mica and hornblende slate can scarcely be distinguished from the igneous rocks.

To a student of nature is revealed the existence of epochs, or periods of time during which various changes were effected by heat, cold, pressure, chemical affinity, and existence of life. Among the results of these agencies are the various formations which are adapted to building purposes. The cooling and shrinking of the earth, and the forces produced by the accumulation of gases, tilt the overlying strata in various directions, and so fracture their bedding as to disclose their formation to the geologist.

The rusting of iron, the decaying of wood, cementation of gravel and sand by percolating water, the demolition of rocky out-crops and their conversion into soil by the solvent action of chemical affinity, and moisture of the air, are things of common observation. Investigation of the causes of these changes developed the science of chemistry.

Geological surveys are prosecuted for the purpose of bringing to light the products of nature, such as coals, clays, marls, building stones, etc., which are in use in the arts and manufactures and their accessibility and value for economic purposes. With a field so broad, and information imperfect, and sometimes unreliable, as many facts concerning building stones remain to be solved, my paper can hardly be free from errors and deficiencies, but every effort has been made to avoid them as far as opportunity has permitted. It might be well to mention a few of the many curious features which arise while gathering matter for a paper of this description. By referring to architectural journals, it will be noticed that all building interests, save that of stone, are fully represented by elaborate advertisements. One answer was elicited by advertising for desired information from quarries. Personal letters to quarry owners, clearly stating my purpose resulted in seven answers. Evidently there must be some reason for withholding the information sought. My conclusion regarding the general reluctance shown by quarry owners to give information, is that they think they would have better success in their sales by private solicitation, than by publicly bringing their stone to the notice of those interested in building, depending upon their success as salesmen, and the ignorance of the general public, or, I might say, their lack of general information. Many articles on building stone have been published, but none that I know of, in such a form as would be of ready assistance in the selection of stone, rendering this a difficult task to those not directly interested. The lack of a general knowledge of building stone is clearly apparent, even to the casual observer of our buildings and sidewalks. It would be a saving to the capitalist when erecting enormous structures, and to those who are building an expensive residence, to take the necessary time to thoroughly investigate the proposed material, as all the various sources of lithology in chemical, microscopical and physical methods of investigation are wonderfully developed and readily applied; or for a small outlay, consult an expert, and secure a good, durable stone for the proposed structure.

*Paper read before the Chicago Architectural Sketch Club, December 6, 1886, illustrated by specimens from the rocks, showing natural formations referred to. Revised by the author for THE INLAND ARCHITECT.

There is an apparent carelessness shown by the owners in this money-getting city, and an over-confidence in those who are intrusted with the expenditure of vast sums of money in building; and the result is, far sooner than expected, thousands of dollars are required in repairs—patching and painting decayed stone. You may coat the decaying walls with one of the many solutions which are used for that purpose, and prevent water and acids from entering the stone, while the coating remains upon it. If the stone is perfectly dry when the coating is applied, and the wall is protected by a damp course, disintegration ceases. But there is always a certain amount of water in a disintegrating stone, which is continually dissolving its cement, and more is continually being absorbed by the unprotected portions of the wall, so, for this reason, disintegration is continually at work, and coating the stone is only temporary.

Builders decidedly prefer a softer stone, because it is easily worked and yields more profit; and, generally, you will find that class of stones used, as a natural result of the indifference or mistaken shrewdness of some party concerned, endeavoring to arrive at grand results with little money. In many sections of the East, over one hundred years of exposure of different building stones in various climatic situations is a practical test of their durability; which, if taken advantage of by those contemplating building, instead of wasting capital as a matter of indifference,—Chicago will be a city of enduring structures as well as of phenomenal growth. Some of the fast-decaying buildings of New York are an example to profit by. I noticed in Philadelphia, that a local blue-veined marble is much used, and shows excellent weathering after many years of exposure. When builders realize the unfortunate mistake of using stone that is not time-tried or known to be durable, and display the same business tact in the selection of stone that is used in accumulating money, then demands will be made for such stone as should go into buildings.

There is a certain class of cheap construction necessarily demanded in a large city. There is also an abundant supply of suitable materials which should be used for that purpose. I noticed a statement, some time ago, that brick was the only fireproof building material. Many varieties of silicious sandstone, for instance, the buff freestone, from Amherst, Ohio, resists a white heat 2370 degrees Fahrenheit, where used for linings and hearths of iron furnaces. A hornblende syenite granite, and some of the primary rocks, are practically indestructible, having had their baptism of fire centuries ago. In fireproof construction there is a choice for the architect. He is not confined to the glaring red of brick and terra-cotta—for there are beautiful rocks among the primary formations and among sandstones—presenting colors which would please the artistic eye, suitable for the purpose, susceptible of fine carved effects, and readily worked.

I hope to see the monotony of red building material relieved by solid, handsome buildings of these rocks.

Regarding brick keeping clean, it may be stated that a brick front is rarely erected perfectly clear of white efflorescence, and the brick all of the same shade of color and degree of hardness. While the hard brick resists climatic effects, the softer ones are gradually dissolved, and it is only a question of time before the front requires a coat of paint, or repairs. The requisite qualities of a good building stone can soon be learned by a close observer.

Costly experiments in structures in various parts of the country have most of all aided in the development of the economic part of this knowledge. The application of chemistry separates constituent parts, and the wonderful microscope (the inseparable companion of the geologist) is most fruitful in determining component parts, and leads most directly to the desired results. In the selection of building stone particular attention must be given to the climate of the locality where used. Stones which readily absorb water are not likely to be durable in a variable climate you can test this point by wetting a stone and rubbing it), as water softens the stone, allowing the elements to wash it away from the walls of a building, or it freezes in winter, and splits the stone. Especially do not use such a stone at or near the ground line, without thoroughly protecting it by a damp course.

Lamination in stone is an indication of weakness, as such stone will occasionally slip under pressure, and shale off, when on edge.

Stone often varies from different parts of the quarry and also from different parts of the same bed. So very great care should be exercised in its selection. It would be a saving to employ a competent inspector when quarrying stone for a large building.

From tests of crushing strength by G. A. Gilmore, I will give the largest and smallest in both 1 inch and 2 inch cubes:

SANDSTONE	1 inch	4,250	New Brunswick.
	2 "	17,000	
	1 "	17,725	Medina, New York.
	2 "	71,000	
MARBLE	1 "	8,670	Dorset, Vermont.
	2 "	34,680	
	1 "	20,025	Wisconsin.
	2 "	80,100	
LIMESTONE	1 "	5,650	Canton, Missouri.
	2 "	22,600	
	1 "	25,000	Lake Champlain, Vermont.
	2 "	100,000	
GRANITE	1 "	10,375	Keene, New Hampshire.
	2 "	41,000	
	1 "	24,040	Passaic County, New Jersey.
	2 "	96,160	

Stone quarried in summer will lose its quarry water by evaporation, and stand better in a wall. When carbonate of lime is the cement, a quantity of it is held in solution by the quarry water. As the stone loses the quarry water by evaporation, or dries out, the carbonate of lime, which is held in solution, is deposited in the stone as additional cementing material and, therefore, makes it more compact. Freestone containing oxides of iron as a cement, sometimes hardens by exposure to weather; this is supposed to be caused by the oxides of iron passing to a higher

degree of oxidation by absorbing oxygen from the atmosphere. When silica is the cement, and held in solution by quarry water and once crystallized, it then becomes insoluble, and the stone will not be softened by exposure. This is the reason of the durability of a silicious sandstone.

The disintegrating ingredients of a stone should be the first consideration. The principal agents of destruction to a granite are, epidote kaolin, calcite, pyrite and iron oxides. They are all readily detected by the microscope, and, if existing in quantities, by the eye. Epidote gives it a green color; its crystals are always green.

Kaolin (pure clay) is decomposed feldspar and readily distinguished by its white, soft, minute, scaly appearance. When free from soluble alkali it burns perfectly white. Calcite, the mineral which is the base of all limes, can be discovered by its effervescing activity with dilute acid. The microscope shows it in crystals, if not in the form of shells. Pyrite (sulphide of iron) by small specks of yellow metallic luster. The various oxides of iron are distinguished by their color, and show wherever they exist.

Iron pyrites (iron sulphides) and iron oxides are the principal agents of decomposition in limestones and sandstones, unless properly incorporated in the stone. Iron pyrites, unless in sharp, well-defined crystals, are a serious detriment to a soft stone, as it decomposes readily, stains the stone and causes it to blister or shale, as noticed in our euclid-stone sidewalks. In a hard, non-absorbent stone the pyrites will be washed away and leave a hole. In the Wyoming valley, Penna, bluestone the iron pyrites are sharp, thoroughly disseminated crystals, and their presence is advantageous, and assists in making it a durable stone.

All of the oxides of iron are held in solution in the stone in the quarry by water of hydration, and are carried around and through the stone by percolation, and thus they wash out, and the stone loses its color and cement and falls to pieces, unless it retains enough to hold the particles of the stone together. Generally speaking, if rock in a quarry lays above drainage, its color is permanent and uniform, as the stone has been traversed by atmospheric waters, and all possible oxidation has taken place. Brown sandstone should be quarried early in the season to get the water out of it and set the color. Sometimes the color can readily be washed out, as I did with a piece of soft, brown sandstone from Houghton on the north shore of Michigan. Such a color is generally dull and with no life. Among the distinguishing features of color and durability in sandstones, which are due to iron oxides, may be mentioned:

Red and brownish-red is due to iron in the anhydrous, sesquioxide state, for instance the Lake Superior.

Bright yellow color is due to the hydrous sesquioxide of iron; an example is the Amherst (Ohio) sandstone.

Yellowish color to hydrated ferric oxide, as noticed in the Marquette variegated sandstone.

Bluish or greenish color to the ferrous oxide, as noticed in the Michigan sandstone.

The brighter, or more lively color the stone possesses, shows a less hydrated or watered state of the iron cement, and thereby a hard stone, unless the iron is incorporated in the grains of sand which compose the stone and thereby give the stone the color, then the strength of the stone depends upon the amount of the cement.

A dull, lifeless, and bluish or greenish color is liable to turn by the action of the oxygen of the atmosphere to a dirty red, either evenly or in spots, because the more hydrated ferric oxide absorbs nitrogen and carbonic acid, which assists to disintegrate the stone.

Decided blue or gray color is mostly caused by the carbonate or prot-oxide of iron, although blue is sometimes a finely disseminated iron pyrites and occasionally an iron phosphate, as in the New York blue which contains pyrites and a small portion of the phosphate.

The weather acts both physically by rain, wind and frost, and chemically by the solvent action of the atmospheric impregnated water, and the oxidizing action of the oxygen of the atmosphere which bleaches and softens carboniferous and bituminous sandstones; for instance, some of the Carbonadale and Ohio sandstones, and limestones, because the organic matter disappears in the form of a carbon dioxide.

The acid atmosphere of manufacturing cities is injurious to stones composed largely of carbonate lime. In wet, smoky localities, sulphuric nitric, carbonic, hydrochloric and other acids are taken up from the air, by the rain, and spread over the surface of buildings; therefore, soft porous limestones and sandstones which contain calcareous matter, and more hydrated iron oxide as a cement, are susceptible to their attack, and should not be used. In winter time much acid is condensed with a small quantity of air, and its effect is most destructive.

The life of a building stone is shortened by alternate freezing and thawing, changes from dryness to moisture, and differences of temperature at the same moment, from the outside and inside of a building. The direct rays of the sun will reach 120° on the outside of a building, while the inside may be but 70°, and in winter the outside may be 20° below zero, and the inside 70° above—either situation is a tremendous strain to be borne by a stone, exclusive of what is expected of it in a building.

Sometimes the life of our building stones, in which carbonate of lime is the cementing material, is prolonged by the formation of a thin pellicle of black sulphate of lime which is wholly insoluble in acid or water. This can be noticed in many of our business buildings by their dingy appearance. It may be fairly said that the durability of a stone depends on its impermeability to water, its density, evenness of texture, and amount and kind of binding material it contains. Each given point must be carefully considered before condemning a stone, as what it lacks in one constituent may be made up by a superiority in others. Many stones for building purposes have been introduced into Chicago by enterprising persons, and now examples may be seen from almost every section of this country, and some foreign ones. We have had scarcely the time to test the durability of all of them,—some of them are disintegrating, and such as are proving unreliable can be avoided in the future, and a better class of buildings be erected.

(To be continued.)

Association Notes.

WESTERN ASSOCIATION OF ARCHITECTS.

At a recent meeting of the Board of Directors, a committee was appointed to serve, and report at the next convention, upon the motion of Mr. C. C. Helmers, of St. Louis, passed at the last convention :

Resolved, That the president appoint a committee of three members from each state association to collect information in regard to legal decisions relating to building interests, and that they report at the next annual convention.

The committee is as follows:

- Missouri*.—Chas. C. Helmers, chairman, room 39, 418½ Olive street, St. Louis; Adriance Van Brunt, Kansas City; T. B. Annan, room 64, 904 Olive street, St. Louis.
- Kentucky*.—Henry Walters, Courier-Journal building, Louisville; H. P. McDonald, N. E. corner Fifth and Market streets, Louisville; H. L. Howe, Louisville.
- Tennessee*.—Geo. W. Thompson, Nashville; Joseph F. Baumann, Knoxville; Chas. C. Burk, 280 Main street, Memphis.
- Minnesota*.—L. S. Buffington, room 20, Boston block, Minneapolis; Isaac Hodgson, room 56, Loan and Trust building, Minneapolis; D. W. Millard, room 505, Drake block, St. Paul.
- Texas*.—James J. Kane, Fort Worth; S. A. J. Preston, Austin; N. J. Clayton, S. E. corner Twenty-third and Strand streets, Galveston.
- Nebraska*.—Sidney Smith, room 20, Withnell block, Omaha; Z. L. Fisher, Paxton block, Omaha; Geo. W. Field, Omaha.
- Michigan*.—Sidney J. Osgood, room 9, Porter's block, Grand Rapids; Lemuel D. Grosvenor, Jackson; G. W. Lloyd, 34 N. Fort street, Detroit.
- Illinois*.—Louis H. Sullivan, room 46, Borden block, Chicago; C. L. Stiles, 115 Dearborn street, Chicago; Wm. Holabird, 57 Montauk block, Chicago.
- Indiana*.—J. W. Reed, Evansville; J. F. Wing, Ft. Wayne; B. Vonnegut, Indianapolis.
- Ohio*.—J. W. Yost, 45 N. High street, Columbus; E. O. Fallis, 48 Chamber of Commerce, Toledo; S. E. Des Jardins, 62 Pike's building, Cincinnati.
- Kansas*.—J. G. Haskell, Gavitt's block, Topeka; E. T. Carr, Leavenworth; A. W. Haywood, Wichita.
- Wisconsin*.—E. T. Mix, Evening Wisconsin building, Milwaukee; D. M. Harteau, Green Bay; H. C. Class, Milwaukee.
- Iowa*.—W. F. Hackney, Des Moines; C. H. Lee, 317 Fifth street, Des Moines; E. H. Taylor, 19 First avenue, Cedar Rapids.
- Georgia*.—F. C. Bruce, 1½ Marietta street, Atlanta; A. McMurphey, Augusta; T. H. Morgan, Atlanta.
- New York*.—Louise Bethune, 531 Main street, Buffalo; J. G. Cutler, 35 Rochester Savings Bank, Rochester; W. W. Carlin, 55 Chapin block, Buffalo.
- Dakota*.—Albert E. Cobby, Yankton.
- California*.—Eugene S. Calkins, Los Angeles.
- Wyoming*.—J. S. Mathews, Cheyenne.
- Louisiana*.—Thos. Sully, 73 Corondole street, New Orleans.

A motion by John W. Root, passed at the last convention, was acted upon.

WHEREAS, In the case of each building constructed from the designs, and under the supervision of a member of this association, the owner of the building should be supplied with full data of all official points involved in its construction.

Resolved, That the Executive Committee have printed and mailed to each member of the association a form, the object of which shall be to supply to members, under the seal of the association, a schedule of points in relation to which the Executive Committee deem it advisable that clients should be informed.

The board has adopted and printed the following form :

WESTERN ASSOCIATION OF ARCHITECTS.

STATEMENT OF STRENGTH OF BUILDING.

.....188..

M.....

DEAR SIR,—You will please take notice that the capacity to resist strain of the erected for you at....., fromdesigns, is as follows :

SAFE FLOOR LOAD, EQUALLY DISTRIBUTED.			
Basement story.....	.....	pounds per square foot.	
First ".....	.....	" " " "
Second ".....	.....	" " " "
Third ".....	.....	" " " "
Fourth ".....	.....	" " " "
Fifth ".....	.....	" " " "
Sixth ".....	.....	" " " "
Seventh ".....	.....	" " " "
Eighth ".....	.....	" " " "
Ninth ".....	.....	" " " "
Tenth ".....	.....	" " " "

The strength of walls, piers, columns and foundations has been calculated for carrying the floor load as before stated with safety.

With reference to the running of machinery in the said building,.....state :

.....

With reference to the possibilities of additions to the height of the building,.....state :

.....

.....Architect.

In the case of each building constructed from the designs, and under the supervision of a member of this association, the owner of the building should be supplied with full data of all essential points involved in its construction, as above stated.

[SEAL.] JAMES F. ALEXANDER, JOHN W. ROOT,
Secretary W. A. A., President W. A. A.,
La Fayette, Ind. Chicago, Ill.

This form will be distributed to members, and can be had upon application to the secretary.

CHICAGO BUILDERS' AND TRADERS' EXCHANGE.

At a meeting called at the request of thirteen members of the Exchange to consider the advisability of sending one or more delegates to the convention of master builders, to be held in Boston, January 10, 11 and 12, by unanimous vote of the meeting Mr. Geo. C. Prussing was elected to represent the Exchange.

At a meeting on January 4 the following members were appointed as a nominating committee to select candidates for the coming annual election of the Exchange, which occurs on the 17th inst.: E. A. Thomas, John McKenna, Wm. Herson, J. B. Sullivan, Chas. B. Kimball.

A motion was also carried that the Builders and Traders' Exchange make arrangements for its annual subscription banquet and that a committee for that purpose be appointed. The banquet will take place early in February.

ARCHITECTURAL ASSOCIATION OF MINNESOTA.

The annual meeting of this association was held in the club rooms of the West hotel, Minneapolis, January 4. The various reports showed the association to be doing good work. The principal business was the election of officers, which were as follows: E. P. Bassford, president, St. Paul; G. M. Goodwin, vice-president, Minneapolis; F. G. Corser, secretary, Minneapolis; E. E. Joralemon, treasurer, Minneapolis; D. W. Millard and John Teltz, of St. Paul, and W. H. Hayes and Irving W. Kelley, of Minneapolis, board of management. After the transaction of general routine business, the meeting adjourned.

In the evening, the annual banquet was attended by about fifty members of the association and several prominent members of the building fraternity, who were guests of the association. Letters of regret were received from John W. Root and R. C. McLean of Chicago. Mr. McLean was invited to respond to a toast, the "architectural press," and his letter, containing some remarks on the subject, was handed to the association's official journal, the *Northwestern Architect*, for publication. D. W. Millard, of St. Paul, occupied the seat of honor and made a most felicitous toast master. The Profession of Architecture, as Viewed from the Outside, was responded to by Rev. H. W. Simonds. The Architectural Association of Minnesota, by J. K. Wilson; the Fireproof Man, by G. Sidney Houston; Twin Cities, by F. G. Corser; Engineering of the City of Minneapolis, by Andrew Rinker. These toasts were followed by an excellent address by the new president, E. P. Bassford. Most prominent among those in attendance at the banquet were: Messrs. Burns, Ford, Sullivan, Zehrcke, Millard, Scribner, Wilson, Boardman, Chamberlain, Cox, Granger, Hollman, Haley, Craig, Hayes, Hanson, Martin, Hamilton, Houston, Johnson, Harris, Cauvet, Rinker, Corser, Taylor, Kelley, Baldwin, Goodwin, Boyce, Simmons, Buffington, Breen, Joralemon, Chapman, Orff, Nesbitt, Brown, Bassford, Farnham, Hand, Dodson, Topping, Hodgson, Struck and Grant.

The banquet was altogether a most enjoyable affair, and the sentiments expressed will give a strong impetus and direction to the work of the association.

ILLINOIS STATE ASSOCIATION.

At the regular meeting of the association, January 8, the final discussion of the sanitary bill was entered upon. Besides a very full attendance of members, committees from the Master Plumbers' Association, Alderman Ryan, chairman, A. W. Murray, T. C. Boyd and J. J. Wade, and a committee from the Master Sewer Builders' Association, W. H. Launder, chairman, Charles Berkenshaw, F. W. Forch and W. M. Dee, were present, and also W. H. Genung, city health inspector. After three hours' discussion it was found to be impossible to finish at one sitting, and the meeting adjourned to meet on Saturday, January 15, at two o'clock sharp, when the discussion will be resumed, beginning with section fifteen. It was suggested that the work would be much facilitated if members would study the bill, and where objection was found to any section, to prepare a substitute in writing, so that it could be instantly discussed when reached. At the meeting of Saturday, there was much useless discussion, because members objected to the reading and had nothing to offer as a substitute, and also by having an imperfect knowledge of the contents of the bill. As the bill, in its different phases, has been already printed four times in THE INLAND ARCHITECT, it should be fully understood by each member.

ASSOCIATION OF OHIO ARCHITECTS.

The following circular letter to members of the state association has been issued:

ASSOCIATION OF OHIO ARCHITECTS.

CINCINNATI, December 15, 1886.

DEAR SIR,—The third semi-annual meeting of the Association of Ohio Architects will be held, with headquarters at the parlors of the Burnet House, Cincinnati, Ohio, the third Thursday in January, 1887, at 10 o'clock A.M.

It is earnestly desired that all members will be present, as the election of officers and other important business will come before the meeting.

It is also desired that all who intend to come will notify the secretary as soon as possible of such intention, and bring with them such architects of their acquaintance as they deem qualified to become members.

To make the meeting more interesting, members are requested to bring or send, express charges prepaid, examples of their work; also, to prepare papers of interest to the profession; to be read at the meeting, and notify the secretary of the subject.

Copies of constitution, schedule of charges, and code of competitions, may be had on application to the secretary.

WALTER R. FORBUSH,
Secretary pro tem.

MISSOURI STATE ASSOCIATION.

The following is the programme outlined for the convention, to be held on Tuesday, the 11th inst.:

The Executive Committee of the Missouri State Association of Architects have selected the following subjects for general discussion at the next annual convention, to be held in this city, on the 11th January, inst., and have assigned the opening of the debates to the following named gentlemen:

Uniform System of Measurements. Mr. Geo. Carman.
Architectural Pupilage. Mr. C. E. Illsley.
Professional Etiquette. Mr. J. B. Legg.
Certificates of Membership. Mr. F. B. Hamilton.
Foundations in General. Mr. A. Van Brunt.
Brick Masonry—Use of mortar and treatment under varying temperatures. Mr. F. M. Howe.
Plastering—Proportions of materials, methods of mixing and application—decoration of. Mr. John Beattie.
Stone as a building material—Varieties and uses. Mr. James McNamara.
Hardwoods for Interior Construction—Methods of treatment—avoidance of shrinkage. Mr. E. F. Fassett.
Fireproof and Slow Burning Construction. Mr. T. F. Tinsley.
Contracts in General—Lump and sub-bidding. Mr. G. M. D. Knox.
Plans and Specifications—Preparation of and supply to contractors—ownership of. Mr. Charles K. Ramsey.

Fifteen minutes will be allowed each of the above assignees and five minute debates to each member participating. The Committee earnestly impresses upon the members the desirability of a thoughtful consideration of the subjects here presented, trusting that the large amount of personal and practical information thus elicited will give our association an additional impetus and reason for existence.

The members of the various committees and their chairmen, appointed at the last convention, are expected to be ready with the fullest possible reports.

By order of the Executive Committee, T. B. ANNAN, Secretary.

WISCONSIN STATE ASSOCIATION OF ARCHITECTS.

The architects of the State of Wisconsin met in Milwaukee, January 3, pursuant to a call, issued by architect George B. Ferry, of that city, member of the Committee on State Organization of the Western Association. A state association was formed, and constitution and by-laws adopted. The following officers were elected:

President, E. Townsend Mix, Milwaukee; first vice-president, James Douglas, Milwaukee; second vice-president, William Waters, Oshkosh; secretary and treasurer, Howard Russell, Milwaukee; board of directors, the officers of the association and D. M. Harteau, Green Bay.

The association will meet next on January 17, to complete organization and outline work for the year.

This is the second attempt made by Wisconsin architects to organize, and they are to be congratulated upon their success.

MASTER BUILDERS OF THE UNITED STATES.

Chicago was represented at the conference of master builders of the United States, at Boston by the following: George C. Prussing, builders' and traders' exchange; Thomas E. Courtney, master masons; William Grace, association of master carpenters and manufacturers of wood-building materials; J. G. McCarthy, master painters' association.

CHICAGO REAL ESTATE BOARD.

The annual meeting and election of officers of the board will occur on Wednesday, the 12th inst. Mr. William D. Kerfoot is mentioned as the probable successful candidate for the presidency. Mr. Kerfoot is one of the best known and respected among the Chicago real estate men.

The annual banquet of the board will be given Thursday evening, January 27, at the Palmer House. Preparations are on foot for the occasion of enjoyment such as has characterized all of the banquets given by the board.

CHICAGO MASTER MASONS ASSOCIATION.

At the annual meeting of the master masons, Joseph Downey was elected president. Thomas E. Courtney, treasurer, and Herman Mueller, secretary. Twelve applications for membership were received. The association is in a prosperous condition. Mr. Downey, as president of this, the most important of the master associations of the city, will continue the able work performed by his predecessors, Mr. George C. Prussing and George Fox. As a master mason he has no superior in the West, and his reputation of honesty and gentlemanly conduct, together with his business ability, can be relied on to advance the interests and usefulness of this association.

CHICAGO ARCHITECTURAL SKETCH CLUB.

At the regular meeting of the Sketch Club, on the 3d instant, the evening was principally devoted to the reading of a paper upon style, by Architect John W. Root (printed elsewhere in this issue). The paper was listened to with the deepest attention by the largest attendance of members ever assembled at a meeting of this club, there being over sixty present. The paper was probably the best ever written upon the subject, and the deep silence of the listeners was only broken at the close of the reading, when it was most enthusiastically applauded. Remarks were made by Messrs. Beaumont, Lively and Carpenter, and a vote of thanks was responded to by Mr. Root, in a manner that will always be remembered by the members of the club, and add to the esteem in which the speaker is already held by them. Mr. Root spoke of the relations between the architects and draughtsmen. They were the assistants and often the advisers of the architect, and no architect should decline to consult with his draughtsmen when their opinions would be of advantage. The Sketch Club held the leading position among the draughtsmen's clubs of the country, and the work that they were doing was not only important, but would advance them to the front architectural rank when practicing for themselves.

The following syllabus for the year has been prepared, and was read by the president: December 6, 1886, Chemical formation of building stones, by W. B. Lord. January 3, 1887, Style, by John W. Root. January 31, One hundred bits of Europe illustrated by lantern, by John K. Allen. February 28, Heating and ventilation demonstrated, by W. M. Green. March 28, A day at Maulbroun, by Frederick Keppler. April 25, Byzantine ornament, by R. E. Schmidt. May 23, Ornamental iron-work, by C. W. Trowbridge. June 20, Decoration, by F. L. Linden. August 18, Comparison between ancient and modern architecture, by O. C. Christain. September 12, Originality in American architecture, by Geo. N. Maher. October 10, Ornamental brick architecture, by F. L. Blake. November 7, Annual business meeting. November 14, Annual banquet and exhibit. Besides these papers, each alternate evening is devoted to club work, and a series of eleven competitions are arranged for, to occur monthly during the year.

CHICAGO MASTER PLUMBERS' ASSOCIATION.

The annual meeting of the association occurred on January 5, President T. C. Boyd, in the chair. The report of the sanitary committee was read by C. J. Brooks, the chairman. The report stated that the committee had held four meetings and much had been accomplished. The committee will continue to act and will, upon Mr. Brooks' recommendation, be reduced to five members.

The treasurer's report showed an expenditure of \$346.05 and a balance of \$447.37. The legislative committee reported progress in the matter of conference with the State Association of Architects in regard to the sanitary bill. Satisfactory reports were received from the executive and warehouse committees.

William Howard was elected to membership, and an application for membership from William Goeltz was read. The time of meeting was changed to the second and fourth Tuesdays of each month.

In reply to a communication from the Association of Master Carpenters and Manufacturers of Wood Building Material, asking that a committee of three be appointed to confer upon a proposed code of marking

principals for 1887, Messrs. William Wilson, P. Nacey and W. B. Oliphant were appointed as a committee.

President T. C. Boyd read his annual address, which was full of wise recommendations, valuable advice and comments upon the proper performance of work. He concluded by saying: "In June, 1886, there were 140 members in good standing, January 1, 1887, there were 161. I leave you prospering, with money in your treasury. On the road to prosperity there are no grogshops, and you should be industrious."

A vote of thanks was tendered by Mr. Wade to the retiring officers, especially the president. It was carried by a unanimous standing vote. The following officers were elected: President, Robert Griffith; vice-presidents, J. J. Wade, William Sims, M. J. Reilly, Frank Ruh and William Wilson; recording secretary, J. R. Alcock; corresponding secretary, C. S. Wallace; treasurer, J. J. Hamblin; financial secretary, William Sims; sergeant-at-arms, P. L. O'Hara. For chairman of committees: Sanitary committee, C. J. Brooks; arbitration, William Wilson; auditing committee, Rupert Coleman; license committee, D. J. Rock; legislative, M. Ryan; apprenticeship, David Whiteford; conference committee, J. S. Bassett; library, George J. Stokes; warehouse committee, Hugh Watt; exhibit, T. C. Boyd.

A New Sanitary Exhaust Ventilator.

It is not often that so valuable an appliance is brought to the notice of architects and sanitarians as that presented by the Holbrook and Mann Sanitary Exhaust Ventilating and Heating Company of Chicago. The operation is simplicity itself, and is as effectual as it is simple. The apparatus consists of a gas-jet in an air chamber which draws the foul air out of schoolroom, vault, or any other place usually difficult to ventilate, and replaces it with perfectly pure air. The apparatus was first brought to the attention of a representative of this journal by one of the leading architects of Chicago, and his endorsement was so unqualified that a thorough investigation was made.

Among other tests, one at the Calumet School building, one of the oldest in the city where no provision for ventilation had been made, was visited. Here three ventilators were in operation, two in the schoolrooms, and one in the boys' closets. An unventilated room was first visited, and though on the south side of the building, and ample windows, the air was close and disagreeable. Then we stepped into one where the ventilator had been placed. Here the air was as pure as out of doors. The closets (said to have been the worst kept in the city) located a plain boxed house, fifty feet from the school building were as perfectly ventilated. Some figures were gathered from tests made, showed that in a room 28 by 30 feet, thirteen feet high, with a ventilating flue 18 inches in diameter, the air was exhausted at the rate of 761 feet per minute, or 45,660 feet per hour, or the air was changed in the room four times per hour. This was by the use of six 3-foot burners consuming 18 feet of gas per hour, which being in use eight hours per day, would cost about fourteen cents per day for ventilation. There were fifty pupils in this room, and this test would allow 913 cubic feet of air per pupil per hour. The ventilator is certainly remarkable in its work, and should be examined by not only architects, but by school and municipal boards. It has already received the endorsement of the highest sanitary authorities and experts of Chicago, and its cheapness as well as its efficacy, will recommend it. It is at once positive in its operation, and specific results can be attained in each application. This is the only system that we know of by which the amount of air to be exhausted can be mathematically calculated beforehand with certainty.

New Publications.

ALBUM OF CRANE DESIGNS, published by the Yale and Towne Manufacturing Company of Stamford, Conn.

This is one of the most valuable pamphlets upon the design and use of cranes obtainable. It is in many respects novel in form and presents the subject of which it treats much more fully and clearly than has heretofore been done. The use of mechanical appliances for handling loads economically being in its infancy in this country as compared with the countries of Europe, especially England, this book will be found a real and practical service as well of general interest to architects and contractors generally.

A SEASONABLE greeting, which the A. A. Griffing Iron Company sends to its friends and patrons, is one of the most tastefully composed cards ever issued for trade purposes. It is in four leaves of rough card board. On the front leaf, embossed in gold, is a Bundy radiator and name of the firm. Then a leaf with the compliments of the season, embossed in gold. On the last leaf is a steaming kettle, embossed in color, with the legend, "Should auld acquaintance be forgot," is suggestive right good fellowship, and perhaps as indirectly contains a hint of the solid comfort found in the use of Bundy radiators.

SCRIBNER'S MAGAZINE for January, 1887, is the first number of a new periodical, but the title is familiar and revives thoughts of the Scribner's Monthly of a few years ago. This magazine has been awaited with interest and curiosity, and in no way falls short of the high expectations formed of it. Its name is a recommendation, and an examination of its contents shows it at once to be a full-fledged magazine, without having had a period of infantile growth. The cover, which is simple and unpretentious, is the design of Mr. Stanford White, architect, containing the title in plain letters, surrounded by a conventional border. The illustrations are good, and not too numerous, the aim being, in all cases, to subordinate the pictures to the text. The present number contains a full quota of articles of general interest. After a frontispiece of Gambetta proclaiming the Republic of France, comes Reminiscences of the Siege and Commune of Paris, by ex-Minister Washburne. The first installment of a novel by Harold Frederick, "Seth's Brother's Wife," follows. H. C. Bunner gives the opening chapter of "A New York House." Though both of these start well, the plots are hardly advanced enough to indicate the tendency and result. Capt. F. V. Greene contributes a timely

paper upon our defenseless coasts, in which, with the aid of illustrations, he shows what is needed to prepare our seaports for defense in case of foreign invasion. These, with poems and complete short stories of lively interest, make up the number. As a whole, it is pleasing and attractive, and will find a welcome place, ready and waiting, and will command the attention of the intelligent reading public.

In the last issue of *L'Emulation*, the journal of the Société Centrale d'Architecture de Belgique, appears the announcement of the death of Mr. Charles Claesen, one of the editors of the paper. Mr. Claesen was held in high esteem by his confreres, having been one of the few editors, who have devoted their energies to the propagation of books on architecture, thus rendering a real service to the entire architectural profession.

It is pleasing to note the evident success of our excellent contemporary, the *Northwestern Architect and Improvement Record*. It is managed by men of business ability, and edited by bright journalists who are doing all that seems possible with the material at their command. The section it represents, of which Minneapolis and St. Paul are the center, will owe much of its success, in obtaining good construction and pleasing architectural effects in its upbuilding through the active work done by this journal. We heartily recommend the *Northwestern Architect* to the examination and consideration of architects. It well merits a full support from the profession.

UNDER the heading of Church Decoration, *The Churchman* will print during the present year a series of articles intended to promote the beautifying of churches. They will treat of such topics as the arrangement of grounds about churches, of interior decorations, of furnishing and memorials and other features that are noteworthy and suggestive. This series is published under the superintendence of Mr. Charles R. Lamb, and among the writers already secured are Calvert Vaux, architect; Henry M. Congdon, architect, and Prof. Sturgis; Walter Crane, Henry Holliday and Lewis F. Day, of London; W. J. Stillman (Rome), R. Cleveland Cox, James B. Townsend, W. A. Coffin, Charles De Kay, Roger Riordan, William Walton, Helen Hays, Mary Gay Humphreys, Alice Maud Fenn, and Lilian Bayard Taylor.

Mosaics.

MARTIN RYERSON is to erect at the corner of Market and Adams streets an eight-story warehouse, to cost \$400,000. Adler & Sullivan are the architects.

THE Bricklayers' Union has at last selected the plan for their \$30,000 hall, which is to be built at the corner of Monroe and Peoria streets, and the order has been given to the architect.

It is interesting to note that over 200,000 of English enameled brick have been imported by one Chicago firm, Messrs. Lockwood & Kimball, the pressed brick dealers, during the past year.

MR. V. LE HURAY, who has been for three years the New York manager of Messrs. Merchant & Co., of Philadelphia, has left for London, England, where he will remain permanently located, conducting the office that firm has opened there.

WE have received the catalogue of the architectural works published by the late Charles Claesen, of Brussels. Many of the books are not sold as new, having been some time in stock. A proportionate reduction to their condition will be made, said reduction being from 15 to 25 per cent.

LETTERS are continually received from all parts of the country, inquiring where portable houses can be obtained. This may be that no advertisement of such is found among the advertising pages, but it certainly shows that there is a large demand, and somebody could make money by filling it.

The contract for the steam heating of the Cincinnati Chamber of Commerce building is awarded to Henry Tudor & Co., of Chicago and New York; also that for the Union Depot at Indianapolis. These, with the contract for the Marshall Field warehouse, which is also awarded to this firm, aggregate over \$100,000.

PHILIP WILSON, of Chicago, is doing water color perspective work for architects. He is spoken of by those for whom he has done this class of work as being a first-class draughtsman and colorist. Those who require water color perspectives can have his valuable services by applying to the publishers of THE INLAND ARCHITECT.

HENRY MCSHANE & COMPANY, of Brooklyn, are calling attention to their "McShane A Number 1 Closet," a plunger closet, which has no springs, pistons or cuppleathers, and will work without jar under any pressure, and can be readily repaired by any plumber. Their Crown stone-ware laundry tubs are supplied at about the cost of wooden tubs.

THE foreign journals announce the discovery by a Chinese gentleman of photography in natural colors—the realization of the dreams of all our photographers, from Daguerre's day down to our own. The process, it is to be hoped, is simpler than the name of the inventor, Azurizawa Ryochi Nichome Sanjukanboz Kiobasni-Ku. The photograph taken was the Island of Enosbima.

ARCHITECTS FLANDERS & ZIMMERMAN have prepared plans for Messrs. Griffin & Dwight, for a theater building, 120 by 190 feet, on West Madison street, east of Halstead street. The building will be divided into two sections, the store and office building in front, and the theater proper in the rear. It will be five stories and basement in height, Bedford stone front, French roof; estimated cost, \$200,000. A full description will be given later.

THROUGH an oversight in the advertisement of "Wolff's Transparent Paints," for interior wood finishing, in last month's number of THE INLAND ARCHITECT, the address was omitted. Readers who have written to this office for the address, and such others as wish the catalogue advertised, consisting of eighty pieces of veneers finished with Wolff's Transparent Paints, should address Wolff & Randolph, 933-935 N. Front street, Philadelphia, Penn.

THE Standard burglar proof rein door locks and also the sash locks made by Nimick & Brittan Manufacturing Company, of Pittsburgh, are said to be the acme of perfection in door locks, combining simplicity, durability and efficacy. The burglar proof attachment is operated by a cam on the rein locks, which, when adjusted, prevents the movement of the latch and lock bolts. They also manufacture a mortice lock similar in design and efficiency.

PETROLEUM AND NATURAL GAS is the title of a pamphlet published by the Chicago, Rock Island & Pacific Railway and dedicated to the boys and girls of America. It is a delightfully written description of a trip among the oil and natural gas wells. It is worthy the attention not only of young people in search of valuable information, but those older who are not only interested in oil and gas, but are travelers and can appreciate the great Rock Island route.

A. C. HICKEY is busily engaged in placing his sun burner and stage appliances in the new opera house at Warren, O., and in Meyers' Opera House at Janesville, Wis. He is meeting with exceptionally good success with his burner. He has also received the contract for the plumbing and gasfitting in two four-story flat buildings to be erected on West Indiana street, Chicago, for A. G. Byers. And is also overhauling the plumbing and gasfitting in the Continental Hotel at the corner of Wabash avenue and Madison street.

THE new Produce Exchange at Duluth, Minn., was formally opened on the 2d inst. There were about 100 gentlemen present, and the speeches were general and enthusiastic on the subject of Duluth's development. One gentleman called attention to the fact that "the situation as regards building material was incomparable, having plenty hard and soft woods and the best of building stone." And another expressed the general tenor of the speeches when he said, "Duluth will sprawl all over the Northwest, from Alaska to Omaha."

MR. R. F. BROWN has during the past year completed many large contracts for heating private and public buildings with "Brown's Hot Water Heater." He claims that it insures the greatest economy, while it produces health and comfort; the system presents many advantages, and can be operated with perfect safety by any inexperienced person. "Summer in winter" seems to be realized by this system, as all who are using it unite in saying that at a small expense they manage to keep a uniform and comfortable heat, even in the most exposed buildings.

THE Dunreath sandstone quarries are located near Des Moines in Iowa. The quarries produce a rich red and a number of variegated colors. It is a bluff formation above drainage, which is a guarantee that the colors are naturally set and durable; also renders this quarry one of the few which are worked during winter. It is a stone readily worked, with fine effects carved, and can be used to advantage in most of the various forms of building construction. The offices of the company are located at St. Louis. Lord & Eiker are the agents of the Company in Chicago.

A CIRCULAR issued by the Union Foundry and Pullman Car Wheel Works, of which Geo. M. Pullman is president, states that "the entire interests in the company, of the Boutons and of the Union Foundry Works have been purchased and a complete re-organization effected, and that a general foundry business, especially including car, machine, gas and architectural work will be continued with greatly increased facilities. It is the purpose to make this the most extensive and complete works of the kind in the country." Geo. H. Cole is the General Agent of the company, with offices in the Pullman building.

OWNERS of sawmills, planing mills, furniture factories, cotton gins, and in fact all manner of manufacturing establishments, where there is great danger from devouring fire, and insurance is correspondingly high, should lose no time in adopting every means of protection from the destructive element. Among other things, iron roofing and siding is extensively used to protect from fire originating on the outside, and corrugated or crimped iron ceilings and interior linings to protect inside woodwork. Prominent among the manufacturers of iron roofing, siding, ceiling, lining, etc., in various styles, is the Cincinnati Corrugating Co., whose mammoth works are located on Eggleston Avenue, Cincinnati, Ohio.

AMONG many similar testimonials received by Messrs. Thomas Kelly & Bros., the following is selected as showing the widespread nature of their trade:

CITY ENGINEER'S OFFICE, SACRAMENTO, Nov. 29, 1886.
Messrs. Thos. Kelly & Bros., Chicago, Ill.

DEAR SIRS,—I have seen your closets in operation here, and can truthfully say that they are, by all odds, the best automatic closets ever introduced or put in use here. They give a splendid flush. In fact, I recommended one for use at a point where a small flush tank was needed, and it works admirably. At the Western Hotel, in this city, the use of some ten or fifteen of these closets makes the water-closet arrangements the best of any hotel I have seen anywhere in the state. Yours very truly,
L. F. BASSETT, Civil and Sanitary Engineer.

The popularity of the automatic closets made by Thos. Kelly & Bros. is as general in the cities on our eastern seaboard.

WE take pleasure in making a mention of the deserved success of J. W. Taylor's architectural photograph series. Mr. Taylor started this venture several years ago, and by his personal travels through the eastern and western states he has collected over 1,200 architectural photographs, showing the progress as well as the various styles of architecture prevalent in different parts of this country. The new office buildings, costly residences and business blocks, luxurious interiors, rich details, public buildings and suburban homes, all find a place in this collection, to which Chicago alone has contributed over three hundred subjects. For 1887 Mr. Taylor promises five hundred new photographs from American cities. Architects and others visiting Chicago can spend an enjoyable hour at Mr. Taylor's studio, in looking over this endless collection of interesting views.

THE Bouton Foundry Co., just started at 2600 Archer ave., Chicago, has the largest and most complete foundry plant in the Northwest, for the manufacture of architectural and general iron work. They have adopted all the latest improvements, among which may be mentioned steam cranes of great strength and rapid motion, and a splendid system of ventilation

and lighting, which enables the molders to work intelligently and comfortably. The office force is made up of Mr. N. S. Bouton, president, whose name has been at the head of the foundry business in Chicago for the last thirty years, and especially as president of the old Union Foundry Works, whose name is found on so many of our large buildings; E. G. Shumway, vice-president; F. W. Barker, treasurer, and Carl D. Bradley, secretary, all of whom have been connected with the old Union Foundry Works, and will be actively engaged in the new company.

A FEW days ago twenty-one of the leading "chefs" met at 76 Dearborn street, the office of the Goodwin Gas Stove & Meter Co., to test the various gas cooking appliances manufactured by that company. For some time past the range used by the celebrated caterer, Kinsley, has become so popular that it is now known as the Goodwin Gas Stove Meter Co., and on Kinsley's range a thorough test was made. Game, poultry and meats were cooked to perfection in an incredible short space of time. The meeting appointed a committee, who returned the following resolution: "Whereas, we have found, after a most careful inspection, that the gas cooking appliances of the Goodwin Gas Stove Meter Co., such as the Kinsley boiler, the cake griddle, the waffle baker, the sad-iron heater, the confectioner's stove and the family range, do perform to perfection every duty known to modern cookery; therefore, be it resolved that we, your committee, most heartily endorse and recommend to your favor and use the above mentioned gas appliances in preference to all other systems."

THE Cincinnati Chamber of Commerce building contract has been closed, the entire work having been awarded to Norcross Bros., of Worcester, Mass. There were only two bids for the entire work, the other bidder being the Hallowell Granite Company, of Chicago. The bids stood as follows:

ENTIRE BUILDING.	
Hallowell Granite Co., Chicago—	
Jonesboro granite.....	\$532,958 00
Norcross Bros., Worcester, Mass., six bids—	
Worcester granite.....	\$524,000 00
Westerly granite.....	560,000 00
Missouri granite.....	596,000 00
Kibbe and Westerly.....	510,000 00
Denver and Missouri.....	525,000 00
Denver and Westerly.....	518,000 00

The contract was therefore awarded to the above firm, the building to be completed in eighteen months. The bids are given in detail on advertising pages.

THE iron business of Chicago has, during the past few years, developed into one of the leading industries of the city. In construction it is gradually driving out its old opponent, wood, and in our mammoth structures it is the principal factor. To accommodate the large increase of business, several enterprising firms a few years ago constructed large foundries, and with the present demand, will soon have to enlarge them. The variety of uses to which iron can be applied gives a wide range to the enterprising manufacturer, and allows each to make specialties of certain classes of work. The fire escape business, which a few years ago was considered a novelty, has attained such proportions that every level-headed tenant's first thought is to ask if the building is well-provided with these appliances. All our high buildings are fitted with them, and nearly all of them bear the mark of M. Benner & Co. No man understood better than ex-Fire Marshal Benner the use and necessity of perfect fire escape appliances. This firm have, during the past few years, added to their large trade the manufacture of all styles of building and architectural iron, and the many large contracts that the firm has executed in the past year are a sure indication of their popularity among architects and builders.

THE following circular letter has just been issued, addressed to the public libraries of the country:

OFFICE OF THE LA CROSSE PUBLIC LIBRARY,
LA CROSSE, WIS., December 1, 1886.
To
DEAR SIR,—The trustees having in charge the fifty thousand dollars, bequeathed by the late Governor C. C. Washburn, for the purpose of establishing and maintaining a public library in the city of La Crosse, have appointed the undersigned a committee on plans for a library building. As an aid to secure the best possible results, the committee have thought it advisable to issue this circular letter asking information, and send same to a number of the leading libraries of the country having capacity for about the same number of volumes we wish to provide for, and ask of such libraries the favor of cuts or sketches showing the style of building occupied by them, and the interior arrangement of same. We ask this information of you, and also request that you fill out the inclosed blank, and mail in envelope inclosed. We will feel under obligations for same, and for any suggestions you may make in addition.

Respectfully yours,

JOSEPH CLARKE,
JOHN M. HOLLEY,
F. A. COPELAND, } Committee.

The questions asked are as follows:

What is the name of your library? In what city is it located? In what state? Who designed building? Give address. When was it built? Is it built of brick or stone? What are outside dimensions on ground floor? If interior is of more than one room, give size of each. What did building cost? How much additional for shelving? How is building heated? What did heating apparatus cost? How is building lighted at night? Would you suggest any improvement in your building? How many volumes have you now? What is your additional capacity? Give name and location of any library building you would recommend as a model. Have you printed by-laws and rules? If so, please send copy. Please give name of person to be addressed in case of future correspondence.

This committee evidently intend discharging their duty fully, and giving to La Crosse as good a library as the money can buy. If they continue their good work they will select as architect one who has a reputation rather than one who has influence, and for this reason plans that are offered for nothing, if any such are presented, should not be considered.

As far back as history can reach we find the use of glass. The Egyptians understood the art of manufacturing white and colored glass, of carving and gilding it, and many of the ornaments discovered in the catacombs of Thebes and Memphis bear evidence of their proficiency in its manufacture. Sixteen hundred years ago the glassmakers had become so numerous in Rome that special quarters in the city were allotted to them. Later, Venice became the center of the manufacture of glass, and the skill of its artists has not been surpassed to this day. The art of carving glass and transforming its plain surface into an article of ornament was first dis-

covered by a German artist, Gaspard Lehman, in the sixteenth century, though it is claimed that its origin dates to the old Roman epoch. However, with the progress of all industries, glass engraving has made rapid strides: with our modern appliances and ingenuity, what used to be the work of months of toil, is now accomplished in a comparatively short time. The finest design can be carved on glass, thus giving all the advantages of light with pleasing and artistic effect. This brilliant and useful substance has not been neglected in the United States, and no better examples of the progress of ornamental glass can be found than in the goods manufactured by the Western Sand Blast Company of Chicago. Employing, as they do, a select corps of artists, their work has become a synonym of perfection and a trade mark in the country.

Opening a Railroad.

AN excursion party, composed of leading Chicago contractors, in response to an invitation extended by the Pioneer Fireproof Construction Company, recently visited the works of the company at Ottawa, Illinois, the object being to "open a railroad." The "railroad" over which the company were favored with free annual passes, was found to be a tramway, about a mile and one-half long, to be used to haul the clay from the mines of the company to the works. The party included George C. Prussing and John Goebel, prominent Chicago builders, Fred C. Eames, of the Commercial National Bank, and others. The works were visited and inspected, the vast building now nearing completion, where the company will manufacture firebrick, etc., was commented upon, and after a viewing of the clay mines of the company, which are pronounced incomparable for fineness of the clay and its accessibility, the guests sat down to a substantial and elegant dinner at the Clifton House. Here the after-dinner speeches, while in some degree technical, verging upon the laudatory, when the works of the company and its officers were mentioned, were witty, and appreciated by the assembled guests. Mr. E. V. Johnson, general manager of the company, proved an entertaining toastmaster. Many toasts were responded to,—those by Dr. Smith, and the editor of the *Ottawa Journal*, being especially felicitous. The next item on the programme was the important one of driving the gold spike, and formally opening the railroad, which was done, and the blows which fell on the spike were accompanied by the wish, that the company in its business transactions might always hit the nail on the head. The company returned to the city the following morning, having been handsomely entertained and in possession of a valuable understanding of not only the many advantages of hollow tile for fireproofing purposes, but of the process of its manufacture.

Ives' Process Engraving.

THE cut of the Rialto building in this number is a specimen of photo-mechanical engraving by the Ives' process. It was invented by Mr. Ives, in 1878, and introduced into successful commercial operation in 1881. It is controlled by the Crosscup & West Engraving Company, 907 Filbert street, Philadelphia, a specimen of whose process is in this number. We copy as follows from their circular:

The Ives process is adapted for producing plates from all kinds of photographs (negative preferred), brush drawings, and similar copy not already made up of sharp lines or dots. A very important application of Ives' process is for the reproduction of portraits, for which purpose it is superior to all other typographic methods, because it preserves the likeness with photographic accuracy.

Photographs, negatives, ferrotypes, or drawings made with the brush, crayon or pencil, may be sent, and such copy, if to be worked from direct, *should be very perfect*. The process does not improve upon copy, but follows with photographic accuracy, all faults or imperfections (if any there be) in the original. When it is impossible to secure good copy, we can retouch or make a new drawing, and such retouching or drawing will increase the expense according to the labor expended.

Good plates can always be made from good photographs, but *better plates can be made from original negatives*, which should be sent whenever they can be obtained. We prefer negatives fully exposed, rather thin, and rich in detail both in shadows and high lights; but any good negative is better than a print made from it. We can enlarge or reduce as may be required; the enlarging, however, has a tendency to magnify imperfections more or less according to the enlargement. Reducing tends to improve.

Very fine woodcut, steel-plate and lithographic prints, which admit of little or no reduction by the ordinary photo-engraving process, may be reduced by Ives' process to any size desired.

Elevators in England.

IT was an interesting comment upon the superiority of American elevators, that was developed by a conversation said to have taken place between a prominent architect, from the United States, and a number of English architects at London. The subject of high buildings was discussed, and Hale Elevators were mentioned as being in general use in them. Said an English architect, "Ah, but your lifts, how high do you run them up?" Said the American, "To the second story, we walk the remainder of the distance." "Ah! but really, now: How far do you run them up?" "To the top of the building, of course." "And your buildings are, some of them, over a hundred and sixty feet high?" "Yes, what of it?" A "now-I've-got-you" smile wrinkled the face of the Englishman as he said, "Then how do you manage to dig a hole for the counter-balance one hundred and sixty feet deep?" A slight smile was indulged in by the architect when he explained, "Oh, we had such an elevator as you describe in Milwaukee, or somewhere, twenty years ago, but we haven't seen one since." The Hale Elevator came into general use about that time, or a little later, and in fact the architect might have gone farther into the subject and shown how it was the elevator that had made high building possible. This conversation occurred some time ago, and the

Hale elevator so universally used in the United States, the efficiency of which is so well shown in those in the Rialto office building, illustrated in this number, as well as in a dozen other of Chicago's latest structures, is fast supplanting those of English make in England.

Railroad Notes.

THE Chicago, Rock Island & Pacific Railway is out with a new list of dates for its unrivaled first-class excursion to California, covering several dates (by all routes) during the months of December, January, February and March, at extremely low rates. For detailed information, tickets, sleeping car accommodation, etc., apply to nearest ticket agent, or address, E. A. Holbrook, G. T. & P. A., C. R. I. & P. Ry., Chicago, Ill.

INTELLIGENT people who are familiar with the respective advantages which are offered by the several competing railroad lines between Chicago, St. Louis and Kansas City, and who desire to travel with the utmost speed, safety and comfort, always take the popular and reliable Chicago & Alton railroad between those points, and passengers going to or coming from the South via St. Louis, or when going to or coming from the West via Kansas City, should insist upon having tickets that read over the Chicago & Alton. It is the only road with two complete and elegantly equipped dining trains daily between Chicago and each of the points named, and no railroad managers in America have a more intelligent appreciation of the wants of the traveling public than do those of the famous C. & A.

THE Missouri Pacific Railway, from St. Louis to Kansas City, with its branches and leased lines to Wichita and other points in Kansas, and down through the Indian Territory into Texas, is now one of the greatest and most complete railway systems of the world. No finer cars are made than the day cars, reclining chair cars, sleepers, etc., that run daily and nightly from St. Louis on this line. The track is admirably smooth and perfect, the long trains start and arrive promptly on time, and there is shown a courtesy and attention to passengers which is as agreeable as it is rare. The travel over this route is so heavy that the evening trains from St. Louis are now sent out in two separate sections, one starting ten minutes later than the other. The main road runs through one of the oldest and finest sections of Missouri, the trains are seldom obstructed by snow, and no route in the country presents more attraction to travelers bound westward in the winter season than the Missouri Pacific Railway.

A NEW fast line to St. Paul and Minneapolis is now opened from Chicago, Peoria and St. Louis, via the "Burlington Route,"—Chicago, Burlington & Quincy Railroad,—in connection with the newly-completed Chicago, Burlington & Northern Railroad. Over it a double service of through trains is run, making as fast time as is made over any other line between the same points. The new and elegant equipment composing these trains, which was constructed especially for service on this new line, will include Pullman Sleepers, "Burlington Route" Dining Cars and comfortable Passenger Coaches. From both Chicago and St. Louis through Coaches, Dining Cars, and Sleeping Cars are run; and from Peoria, through Coaches, connecting at Rio with the through equipment from St. Louis. For tickets, rates, and general information concerning the "new fast line" to St. Paul and Minneapolis, via the Burlington Route, call on or address any Railroad Ticket Agent, or PAUL MORTON, G. P. and T. A., C., B. & Q. R. R., Chicago.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT
CHICAGO, ILL., January 10, 1887.

It is not at all to be wondered at that capitalists, manufacturers, architects, builders and business men, great and small, should be extremely solicitous about the course of trade, prices and building during the year 1887. The country has had a taste of prosperity, and wants more. The producing interests throughout the country are citing, and talking conservatism, lest the improving tendency be destroyed by a sudden over-production and a gorging of the channels of trade with goods and material. Investors are on the alert for valuable investments in railroad, manufacturing, building or speculative channels wherever favorable opportunities may be found. The money markets are fairly well supplied with money and lenders are seeking borrowers in most markets, especially where large blocks of capital are under control. Every now and then a slight stringency in money occurs between small borrowers and lenders, but taking the monetary situation as a whole, rates of interest are in favor of borrowers, and the volume of circulating medium is likely to increase rather than decline. The silver party are gaining in numbers and political and commercial strength, but they will have a difficult battle with the opponents of their theories among Eastern lenders, who have always looked upon even a limited coinage of silver as an evil to be removed as soon as possible. Just at present there are no ugly features in the monetary situation. This fact is money, because all depressions begin with some disturbances or entanglements in monetary matters. Our financiers and law-makers recognize the necessity of watching the currency requirements of the country very carefully, and will be slow to recommend or endeavor to carry out any policy which would antagonize the interests of the producing masses as against the mere money lenders. The year has closed under very satisfactory conditions, and the industries have been fully employed for at least five months. Capacity in every branch has been enlarged and manufacturers of all kinds of products and commodities are oversold far in excess of what is usual at this period.

Trade combinations are being formed with a view of protecting the interests of each. In several branches, manufacturers are either declining to accept large orders or are advising their customers to defer the placing of orders until later in the season. There is a strong upward tendency at work in iron, steel, lumber, hardware, railway building material and in machinery, as well as in the multitude of smaller channels. It is possible that such an advance will be made in 1887 as will induce manufacturers to forego the advantages of a heavier trade. This evil, however, is recognized, and will be guarded against carefully. There is a strong temptation to unduly increase capacity. Manufacturers who find orders pressing upon them for material to be delivered three or six months hence certainly feel like building new works or extending their old ones. But in this lies a great danger. This unusual demand is, to a large extent, an unnatural one. Not more than a year ago it was stated and repeated in trade papers that the productive capacity of the country could make in six months what could be used in twelve. We have passed that condition, and find that buyers who want material are obliged to order

from three to six months ahead. This condition of things certainly cannot last. It would be therefore wise for manufacturers if they will enlarge their capacity to do so with cash in hand rather than to borrow money to make their improvements. If there is a fall, their loss will fall upon themselves, and they will avoid the strain and anxiety of struggling through a year or two of depression to pay for unproductive property. The volume of building during 1886, when the statistics are carefully gathered, will, no doubt, be found to be somewhere in the neighborhood of twenty per cent in excess of the previous year. It is quite probable that 1887 will run ten, fifteen and possibly twenty per cent ahead of 1886. The iron trade is regarded as the barometer for all others. In 1885 our main line mileage reached about 3,000; last year our main line mileage has reached fully 8,000 miles. At this time the rail makers have sold rails enough to lay over 11,000 miles of road, and have capacity to turn out rails enough to lay about 18,000 miles of road altogether. Our American rail-making capacity is not sufficient for home requirements, the output of the largest rolling mill in the West being already sold up to next October. Already over 100,000 tons of foreign material have been purchased, and brokers in Philadelphia and New York are negotiating this week for large additional supplies, which will be wanted as fast as they can be delivered. Under this stimulus European and British markets are improving. The bridge builders of the United States formed an association a few days ago in New York, representing \$70,000,000 of capital. The bar-iron makers have their association, the nail makers, theirs, the wrought-iron pipe makers, theirs, and, in fact, every branch of the iron and steel industry is compactly organized, and statistical information of great value is promptly exchanged, so that all may know how to control their respective interests to the best advantage. The builders throughout the West, as well as the East, have had a very prosperous year, and are confident that the current year will bring them more work and better prices. This prosperity is due very largely to the fact that emigration is extending throughout the West and Northwest. New shops, mills and factories are springing up where they were never expected. Valuable deposits of coal are found in regions where coal was never supposed to exist a few years ago. Railroads and coal mines have laid the foundation for the development of new and diversified industries throughout the region beyond the Mississippi. This development means an increased demand for manufactured products, and for the skill of architects and for the services of builders.

Synopsis of Building News.

Ambia, Ind.—Chas. L. White is a member of a banking company who propose to erect a two-story brick bank building, 22 by 60 feet; to cost \$5,000. No architect yet employed; S. Fix, mason; Joseph Camyan, carpenter. Building to be commenced March 1, 1887.

Buffalo, N. Y.—Architect W. W. Carlin reports: For G. R. Porter, alterations in house; cost \$2,000; J. Jaecle, builder. For J. D. Larkin, frame residence and stable, on Hodge avenue; cost \$3,500; J. Jaecle, builder. (These two buildings were by error credited to Architect Humble in our October issue.)

Architects C. K. Porter & Son report: For Church of Christ, redstone church building, corner of Richmond avenue and Bryant street; cost \$18,000. For Plymouth congregation, redstone church building, corner of Plymouth and Porter avenues; cost \$50,000.

Architects Green & Wicks report: For St. Luke's Church, chapel on Richmond avenue; cost \$10,000.

Barton, Wis.—Architects Edward V. Koch & Co., of Milwaukee, report a school house and sisters' residence combined; cost \$8,000; gas machine, school furniture; contracts not let. Rev. Rockingruver, pastor.

Bentonsport, Ia.—J. F. Mason has prepared plans for J. F. & E. R. Mason, for a two-story frame factory building, 60 by 200 feet, iron or felt roof, steam heat and power, electric bells and electric lights; cost \$5,000; to be commenced in January, 1887. The barby wire and soap factories (one-story frame buildings) are to be commenced at the same time.

Cedar Rapids, Ia.—Architect W. A. Fulkerson reports: plans for M. S. Jackson, two-story frame dwelling, 30 by 40 feet; cost \$2,200. Plans for remodeling frame dwelling for J. T. Hamilton; cost \$2,000.

Cedartown, Ga.—Architects Bruce & Morgan, of Atlanta, report: For the School Board, two-story frame schoolhouse, six rooms; cost \$4,000; contracts not let; address A. Richardson, clerk of board.

Chicago, Ill.—The building statistics of the past year have been a surprise even to those most actively engaged in construction. In spite of the strikes in May, that entirely stopped all classes of building, the amount of permits issued during 1886 exceeded the previous year in amount of cost by \$1,700,300, showing the largest amount of building done in five years. The following tables will show the figures in a condensed form for different sections of the city, the total in classes and grand total, and a comparison of the five previous years.

		FEET.	COST.
1886.	South Side, 1,107 buildings	27,641	\$ 8,622,900
	“ North “ 620	16,574	3,342,900
	“ West “ 2,937	68,087	9,358,600
Number of buildings constructed			
	“ basements	4,664	453
	“ feet (lineal)	112,302	1,703
	“ sheds and barns	1,703	21,324,400
Cost			\$21,324,400
Number of passenger and freight elevator inspection certificates			340

		FEET.	COST.
1882.	Number of buildings	3,113	\$15,842,000
1883.	“ “ “	4,086	17,500,000
1884.	“ “ “	4,169	20,689,600
1885.	“ “ “	4,638	19,624,100
1886.	“ “ “	4,664	21,324,400

The real estate transfers for the past four weeks show a greater activity than at any period since 1871, and as in building this is not an unhealthy movement, seems to have none of the characteristics of a “boom.” Still in the face of these facts, rents for both offices and residences are low. In office buildings there are large numbers of offices unrented.

About \$100,000 has been appropriated by the city Board of Education to be expended for new school sites during the year; \$500,000 is appropriated to build new school-houses. The average cost of a fifteen-room building is about \$50,000.

The Cooke Brewery Company, which purchased the P. O'Neill property, corner of Twenty-seventh street and Johnson avenue, is engaged in the erection of a fireproof five-story and cellar brewery building, 91 by 46 feet, which is to be a model in its way, and is to cost \$75,000. The capacity will be two hundred barrels a day. The engine-room will be twenty-one feet high, and the full length and width of the building. Steel joists and brick arches will be used in the floors. The building will be completed by March 1.

Architect W. G. Barfield: For Board of Education, at Lake View, three-story school building, 70 by 86 feet, Indiana brick, Bedford stone trimmings, furnace heat; cost \$22,000. For M. G. Good, three-story stores and flats, 95 by 80 feet, corner Western avenue and Harrison street, Anderson brick and Bedford stone; cost \$30,000; under way; Paul & Porter, masons; Peter Jansen & Co., carpenters.

Architects McAfee & Lively have prepared plans and let contracts for three two-story frame dwellings for a private party, to be built on Cottage avenue, near Forty-fifth street; cost about \$7,500. Also a two-story frame store and flat building in same locality, for Mr. J. Nord; cost \$3,000. Also brick factory building for Mrs. L. J. Colburn, North May, near Chicago avenue; cost \$2,500.

Architects Adler & Sullivan have prepared plans for R. T. Crane, for an additional story to building corner of Judd and Wilson streets, 130 by 200 feet; common brick; cost \$14,000; Barney & Rodatz, masons; Wintermeyer & Dempsey, carpenters.

Architect H. R. Wilson has prepared plans for G. W. Parke, for a two-story brick dwelling, 30 by 60 feet, corner of Monroe and Leavitt streets; contracts include galvanized iron cornice, iron beams, channels, etc., hardwood finish, steam heat, wood mantels,

skylights, stained glass, closets, baths, etc., electric lighting, bells, speaking-tubes; also, stable; cost of improvement, \$10,000; under way; Geo. Lehman & Son, masons, Visser & Miller, carpenters.

Architect C. O. Hansen has prepared plans for T. Winholdt, for a three-story store and flats, 27 by 90 feet, at 477 Indiana street; St. Louis pressed brick, Lemont stone trimmings; cost \$12,000; under way; G. Gilbert, mason; V. Lund, carpenter.

Architects Burling & Whitehouse report: For E. H. Sheldon, eight-story warehouse, 60 by 146 feet, at 150 and 152 Quincy street; St. Louis pressed brick, Marquette stone trimmings; cost \$80,000; under way; Barney & Rodatz, masons; Wm. Goldie & Son, carpenters. For St. Vincent Orphan Asylum, four-story asylum, 120 by 96 feet; at 185 to 191 LaSalle street; Anderson pressed brick, buff Bedford stone; cost \$75,000; under way; Barney & Rodatz, masons; John McEwan & Son, carpenters.

Architect Austin Moody has prepared plans for W. H. Davis for a six story warehouse, 50 by 90 feet, at 22 and 24 Fourth avenue; contracts include iron channels, beams, etc., galvanized cornices, felt roof, skylights, passenger and freight elevators, steam heat and power, closets, etc.; cost, \$50,000; under way; Wm. Iliff, mason.

Architects Sprague & Newell have prepared plans for Mr. Oscar Burdick, for five two-story dwellings, 100 by 62 feet, on Oakenwald avenue, pressed brick, brownstone, galvanized iron cornices, felt roof, skylights, stained glass, closets, baths, etc., hardwood finish, wood mantels, hot air heat, electric bells, speaking tubes; cost \$20,000; contracts not let; to be commenced in the spring.

Architect H. F. Starbuck reports: For F. S. Belden, three three-story dwellings, 80 by 50 feet, on 43d street, near Lake avenue, Tiffany pressed brick, galvanized iron cornices, felt roof, ironwork, skylights, stained glass, marble mantels, closets, baths, electric bells and speaking tubes, freight elevator; cost \$15,000; under way; George Williams, mason; F. N. Chilins, carpenter. For D. F. Bacon, two two-story brick dwellings, 50 by 50 feet, on South Park avenue; cost \$12,000; under way; Daegling & Thompson, masons; W. J. Graham, carpenter.

Architect J. H. Moore has prepared plans for Dr. E. P. Murdock, for a three-story dwelling, 27 by 68 feet, at 148 Loomis street; cost \$9,000; Tobiasson & Co., masons; C. C. Building Society, carpenters.

Architect Theo. Karls has prepared plans for Wm. Jacobs, for a two-story livery stable, 50 by 100 feet, at 266 to 272 Lincoln avenue, Anderson pressed brick, buff Bedford stone trimmings; cost \$10,000; under way; G. Soeffker, mason; M. Bender, carpenter.

Architects Enders & Warnek report: For Mrs. C. Cook, two three-story dwellings, 56 by 64 feet, 3737 to 3741 Ellis avenue, St. Louis brick, brownstone, galvanized iron cornices, slate or felt roof, skylights, closets and baths, hot air heat, hardwood finish, tiling, wood mantels, electric bells, speaking tubes, dumb waiters; cost \$15,000; under way; Goodrich Bros., masons. For Jos. Rosenthal, two-story and basement dwelling, 22 by 62 feet, on McAllister place, St. Louis brick, terra-cotta and Euclid stone, galvanized iron cornices, felt roof, closets and baths, stained glass, hot air heat, wood mantels, electric bells and speaking tubes; cost \$5,800; bids closed. For S. Thomas, three-story flat building, 23 by 50 feet, on 31st street, Indiana brick, stone trimmings, galvanized iron cornices, felt roof; cost \$3,900; under way; Chr. Geyer, builder. For W. T. Belke, two-story store and flat building, 25 by 80 feet, on West Van Buren street, St. Louis brick, stone trimmings, galvanized iron cornices, felt roof, stained glass, closet and baths, wood mantels, stable; cost \$4,570; under way. For Franz Junek, three story store and flat building, 22 by 65 feet, 636 West Chicago avenue, Indiana brick stone trimmings, galvanized iron cornices, ironwork, felt roof, closets, baths, etc., stained glass; cost \$4,600; under way.

Cincinnati, Ohio.—Reported by Mr. L. Mcendenhall: The very open winter has been profitably taken advantage of by all contractors, and buildings started in the fall, as well as those which were delayed by the strikes, are well in hand. I know that all the contractors feel kindly toward their employes, and wish them “A Happy New Year.”

A private letter from a Cincinnati architect states that the “Building Exhibit,” which is started by an organized company, made up largely from among the architects and members of the Builders' Exchange, “is an assured success, all the stock being taken. Quarters have been secured in the exposition building, where a large portion of the space is already engaged. The fact that it will always form a part of our regular expositions gives it an increased value.” The letter also states that “trades unions connected with the building interests are establishing their rates of wages about January, to extend through the year, which will avoid strikes.”

J. Milton Blair, Esq., has been appointed delegate to the Boston Master Builders' Conference, from the Builders' Exchange, to be held January 17, 12 and 13.

J. G. Sohn's large brewery, on Hamilton road, is progressing finely, the plans being from the office of Architect F. W. Wolfe of Chicago. Brick, freestone, and terra-cotta ornaments enter into its construction, and it will be very complete.

Architect Samuel Hannaford has prepared plans for a new city Hall, a much desired and needed improvement; cost \$800,000. It will be built if the legislature passes the bill to issue bonds for its erection.

Bids were opened on December 21, for the new Chamber of Commerce. A complete list of bids and bidders is published elsewhere in this issue. The contract was awarded to Messrs. Norcross Bros., of Worcester, Mass., at their bid of \$524,000.

As it appears, there was no “capital prize” drawn by our local contractors, much to the disappointment not only of them, but the public generally. P. Murray, who is building the foundation, has done and will do fine work, although a little slow. The Board of Real Estate Managers are fortunate in having the superintendence of Mr. Elzner, once in the office of Mr. McLaughlin, of our city, but for a year or two in the office of Mr. H. H. Richardson.

The Emerys will erect flats on Race street, adjoining the arcade, which will be quite ornamental.

The architects and contractors are thoroughly in earnest in the inauguration of a Building Exhibit, which is bound to succeed.

Architect Jas. W. McLaughlin has prepared drawings and plans for a new Young Men's Christian Association Building, to be built of pressed brick, terra-cotta and freestone trimmings. The building is to be five stories high, with slate roof, and to contain gymnasium, baths, library, hall, reading rooms and class rooms, with stores on first floor. The size of the structure is 60 by 80, and, when erected, will be another architectural ornament to our rapidly improving cities. Cost, about \$75,000.

A tramp through the various offices, shows that the craft feel more or less encouraged over the spring outlook, and it now rests with the laboring community to either pet or kill the goose which will lay a golden egg if she be not driven off the nest.

Cleveland, Ohio.—Architects Coburn and Barnum have prepared plans for Waltmer Otis, for a brick and stone theater and business block, on Euclid avenue; cost \$100,000; contracts not let.

Architects Schweinfurth Bros. are making alterations in the Weddle House.

Colorado Springs, Colo.—Architects Wright & Davis report: For John Himebaugh, three-story brick hotel, 63 by 120 feet; cost \$20,000; plans in preparation. For Dr. B. P. Anderson, two-story stone and frame house, 28 by 42 feet; cost \$10,000; taking figures. For C. S. Wright, two-story frame house, 28 by 32 feet; cost \$2,500; under way; Wright & Kenyon, builders. For Geo. Thomas, two-story frame house, 32 by 46 feet; cost \$4,000; under way; Jos. Dozier, builder. For Giles Cressy, two-story frame house, 30 by 40 feet; cost \$3,500; under way; S. E. Sessions, builder. For Herbert North, frame house; cost \$2,000; under way; H. North, builder. For L. Elrich, making plans for residence; to cost \$15,000. For J. Handley, making plans for residence, to cost \$6,000.

Plans for steam heating of the Deaf-Mute Institute of Colorado are before the legislature for appropriation; estimated cost, \$4,500.

Davenport, Iowa.—Architect J. W. Ross reports: Masonic temple building, 130 by 64 feet, four stories and basement, basement and first story to be built of stone, balance of brick; cost \$40,000; contracts not let.

Detroit, Mich.—Architect Gordon W. Lloyd has prepared plans for D. M. Ferry & Co., for a brick warehouse; to cost \$130,000. For the Western Knitting Company, brick factory building; to cost \$20,000. For W. J. Chittenden, alterations in hotel building; cost \$20,000.

Architects Wm. Scott & Co.; For Brush Electric Light Co., brick foundry, etc.; to cost \$26,000. For Peninsular Car Co., brick building, on Ferry street; cost \$10,000.

Architect Mortimer L. Smith: For Boorman & Chapman, brick factory building; cost \$22,000.

Denver, Col.—Architects F. E. Edbrooke & Co. report: Outlook good for spring. For Patterson & Thomas, five-story brick block, 125 by 75 feet; redstone trimmings, steam heat, elevators, etc.; cost \$100,000; basement completed; McPhee & McGinnity, builders. The Hughes Block, Denver Music Hall, two-stories, 125 by 80 feet, iron front; cost \$20,000; almost completed; P. Peatfoot, builder. For R. R. Wright, two-story brick residence; cost \$5,300; under way; J. Goodman, builder. For

C. D. Moore, two-story frame dwelling; cost \$4,200; foundation in. For F. W. Kellogg, two-story brick dwelling; cost \$3,700; under way; — Bishop, builder. For A. B. Wyman, two-story frame dwelling; cost \$2,900; under way. For G. Kasslar, addition to stores; cost \$3,200; under way; A. C. Friedhoff, builder. For C. Clark, block of three-story stores, 62 by 90 feet; cost \$18,000; just commenced; separate contracts.

The Denver City Railway Company are building a three-story addition, 125 by 58 feet, to their stables; cost \$25,000.

Dexter, Mich.—Architect Claire Allen, of Ionia, has prepared plans for the School Board of Dexter, for a two-story schoolhouse, 79 by 83 feet; to be built of brick, stone trimmings; contracts will include iron channels, galvanized iron cornices, hardwood finish, slate roof, Smead system of hot-air heat, stained glass, etc.; cost about \$12,000; bids to be filed on or before December 22; building to be commenced about March 1, 1887; J. T. Hovey, director.

El Paso, Tex.—Architects Stewart & Carpenter report: For S. Hing, two-story brick dwelling; cost \$4,000. For Judge Kemp, brick cottage; cost \$3,000. For S. S. Gillespie, cottage; cost \$3,000. For Irwin & Co., two one-story store buildings; cost \$4,000. For Mrs. M. Townes, cottage; cost \$2,500. For G. Ames, two-story frame residence; cost \$5,000. For J. Wadlington, residence; cost \$6,000. Also several large buildings contemplated, for which sketches are being made, besides considerable work in Mexico. For Chas. Merriam, three-story brick and stone store building; cost \$25,000. For A. Schutz, frame residence; cost \$4,000. Also several small dwellings. Prospects good for spring.

Fair Haven, Ohio.—Architects J. Stover & Son, of Hamilton, report: Two-story brick and stonesschoolhouse; cost \$3,500; under way.

Freeport, Ill.—Architect H. F. Starbuck, of Chicago, has prepared plans for the Episcopal Society pressed brick and stone church building; stained glass, hot-air heat; cost \$15,000; to be commenced in spring of 1887.

Garden City, Col.—Architect C. S. Wright, of Colorado Springs, reports: For W. V. Rector, a forty-room hotel, to cost \$10,000; under way. This is a new city facing the entrance to the "Garden of the Gods."

Hamilton, Ohio.—Architects J. Stover & Son report: For J. M. Long, two two-story frame dwellings, baths, plumbing, plate and stained glass, slate roof, galvanized iron cornices, mantels, gas, iron cresting and fence; cost \$3,000 each; under way. For E. A. Hick, two-story brick dwelling, stone trimmings, plate glass, slate roof, mantels, iron fence, etc.; cost \$3,000; under way. For W. W. Brooker, two-story frame dwelling, 40 by 65 feet, plate glass, mantels, etc.; cost \$3,000; under way. For Henry Mondy, two-story frame dwelling, 27 by 48 feet; plate and stained glass, mantels, etc.; cost \$2,500; under way. Preparing plans for a three-story and basement store building, 40 by 65 feet; pressed brick, with stone basement, stone and granite trimmings, plate and mosaic glass, elevator, steam heat, slate mansard roof, galvanized iron trimmings; cost \$25,000. Also for a two-story store building, 50 by 40 feet, for J. Boethinger; cost \$3,000.

Hot Springs, Ark.—Architect P. J. Ledevide has prepared plans for D. C. Day for a five-story brick veneered hotel building.

Indianapolis, Ind.—The contract for building the new Union depot, Thos. Rood architect and engineer, has been awarded to Joseph Downey of Chicago. Delivery of material for the new structure will be commenced at once, Mr. Downey being anxious to commence the erection of the depot proper as soon as the weather will permit in the spring. The cost of the improvements covered by Mr. Downey's contract is a little less than \$300,000. The contract for building the sheds will be awarded to C. J. Schultz of Pittsburgh, the stipulated price for his part of the work being nearly \$275,000. The depot will be 150 feet square, and the sheds 750 feet long by 190 wide.

Kalamazoo, Mich.—Our city has, as yet, no organized system of inspection of buildings, or permits for building, so that it is not practicable to give any close summary of the amount of building which has been done here during the year. In the way of public buildings and business blocks, the amount expended (as deduced from some statistics recently published) is probably not far from \$200,000. This includes the large brick block of B. Desenberg & Co., the large brick manufactory of the Michigan Buggy Co., the plant of the Kalamazoo Electric Co., the Second Reformed Church (not yet completed), Ladies' Hall, Kalamazoo College (not completed), the Waterbury terrace, the Michigan Central railroad freight house, rebuild, and the beginning made on the new passenger house, and a no inconsiderable amount expended in additions to, and improvements upon various business properties. In addition to the above, the asylum has expended about \$40,000 in new buildings and improvements, while the amount expended on dwelling house property will probably aggregate \$300,000, and the number of new houses is probably considerable in excess of one hundred.

La Crosse, Wis.—Architect S. S. Beman, of Chicago, Ill., has prepared plans for the Batavian Bank and office building, 43 by 114 feet, five stories high, Bedford stone front, with return of twenty feet on the alley; cost about \$65,000.

Marshall, Tex.—The Texas & Pacific Railroad Co. are about to erect shops here.

Marshalltown, Ia.—Architect W. A. Fulkerson, of Cedar Rapids, reports: For Iowa State Soldiers' Home building, 100 by 216 feet, central building two stories and basement, with central tower; wings three stories and basement, with circular bays, etc., basement of stone, superstructure walls of brick trimmed with cutstone, slate roof, iron cornice, iron columns, eye beams, steam heat, plumbing, etc.; contract let to Theo. Peterson; foundation to be completed this year; cost \$63,740.

Milwaukee, Wis.—Architect James Douglas: For C. E. Gause, frame building for laundry; cost \$30,000; John McDermott, builder. For F. W. Wallace, double frame residence; cost \$5,000.

Architects Edward V. Koch & Co., report: For Wm. Bollow, residence; to cost \$10,000; nearly completed. For Chas. Borchard, brick store and flats, 50 by 100 feet,

steam heat, mantels, passenger elevator; cost \$20,000. For Hugo Loewenback, frame residence; cost \$6,000; Chas. Kraus, carpenter; Chas. Jeske, mason.

Mobile, Ala.—Architect James F. Hutchisson, reports: For Mrs. M. H. Turner, improvements in two-story brick, 25 by 38 feet, slate roof; cost \$2,200; under way; Wm. O. Pond & Son, builders. For Hettie White, one-story frame cottage; cost \$2,350; under way; Felix Andre, builder. For Rev. J. Winklereid, two-story frame dwelling; cost \$5,000; projected. For Rev. J. L. Tucker, repairs, etc., to Christ Church; cost \$12,000; projected. For Spring Hill Improvement Co., repairs and improvements; cost \$8,000; projected. Also several dwellings; costing \$2,000 to \$3,000; under way.

Montgomery, Ala.—Architect James F. Hutchisson, of Mobile, reports: For World's Exposition (colored), exposition hall, 300 by 300 feet; art gallery, 60 by 60 feet; woman's department, 200 by 100 feet; grand hotel, 350 by 40 feet; cost of whole improvement, \$125,000; projected.

New Corporations.—The Warmington Stone and Marble Company, of Chicago, Ill., has been incorporated. Capital stock, \$100,000. Isaac H. Fry, 1800 Wabash avenue; James Warmington and H. C. Wheeler, incorporators. The Canton Iron Roofing Company, of Canton, Ohio, has been incorporated. Capital stock, \$25,000. T. C. Snyder, W. L. Alexander, A. B. Walker, T. C. Belding, and A. C. Kannenberg, incorporators. The J. M. Blair Brick Company, of Cincinnati, has been incorporated. Capital stock, \$50,000. J. M. Blair, 45 Johnston Building; B. W. Blair, Jos. B. Blair, T. Smith, and A. W. Williamson, incorporators. The Raymond Lead Company, at Chicago, Capital \$40,000; incorporators, James N. Raymond, Anna L. Raymond, and Charles E. Heiss. The De Golyer Varnish Company, Chicago. Capital stock, \$300,000; Watts De Golyer, Charles F. De Golyer, and Frank S. Weigley, incorporators. The Chicago Lime Company, of Chicago, has been incorporated. Capital stock, \$25,000; Jos. Downey, M. Lester Coffeen, and Henry S. Martin, 69 Market street, incorporators. The Duffy and Hannahs Hardware Company, of Chicago, has been incorporated. Capital stock, \$10,000; James F. Duffy, Minnie Duffy, Sarah E. Hannahs, and George B. Hannahs, 142 Dearborn street, incorporators. The New Jersey Clay Manufacturing Company, of Raritan Township, has been incorporated. Capital stock \$150,000; Isaac M. Holcomb, Plainfield; Charles E. Street, Crawford; and Charles S. Cowan, New York City, incorporators. The Southern Marble Company, of Marietta, Ga., has been incorporated. Capital stock, \$100,000; Jas. B. Harrison, C. D. Horne, M. B. Miles, and Geo. Taylor, of Atlanta, incorporators. The Grand Rapids Veneer Works, of Grand Rapids, Mich., has been incorporated. Capital stock, \$40,000; Geo. H. White, A. B. Watson and Geo. N. Davis, incorporators. The Peerless Slate Company, of Pittsburgh, Pa., has been incorporated. Capital stock, \$3,000; treasurer, William S. Daily; Attorneys Knox & Reed. The Tennessee Marble Company, of Chattanooga, Tenn., has been incorporated. Capital stock, \$100,000; the Claflin Manufacturing Company, of Cleveland, O., has been incorporated. Capital stock, \$75,000; H. M. Claflin, 29 Euclid avenue, J. L. Sterling, T. A. Hoffman, W. B. Page and John Coon, incorporators. The Chicago Sash Pulley Company, of Chicago, Ill., has been incorporated. Capital stock, \$100,000; C. H. Smith, Francis V. Phillips and John Hewitt, incorporators. The Chicago Asbestos Mining and Manufacturing Company. Capital stock, \$100,000; incorporators, Thomas J. Phillips, Frank Stinson and Theodore Worcester, the Watson Cut-Stone Company, at Hyde Park, Ill. Capital stock, \$20,000; incorporators, Henry Watson, J. H. Outhwaite, Frank Hecht and Charles H. Aldrich.

Rockford, Ill.—Geo. H. Cornnack has prepared plans and is about to commence the erection of a four-story and basement brick factory building, 78 by 70 feet; also two-story engine room, 34 by 70 feet; contracts will include iron channels, beams, etc., galvanized iron cornices, felt roof, skylights, elevators, steam heat and power; cost about \$10,000; foundation in; Geo. Wilson, mason.

Rushville, Neb.—H. A. Chamberlain is building a court house to rent to the county.

Sioux City, Ia.—Architect W. A. Faulkner, of Cedar Rapids, Iowa, reports: Plans for frame dwelling for George Owen, 36 by 44 feet, with all modern conveniences; projected.

St. Charles, O.—Architects J. Stover & Son, of Hamilton, report: Washington M. E. Chapel, 28 by 50 feet, lecture room, 16 by 30 feet, brick, with stone tower and vestibule, galvanized iron, and stone trimmings, stained glass, furnace heat; cost \$4,000; under way.

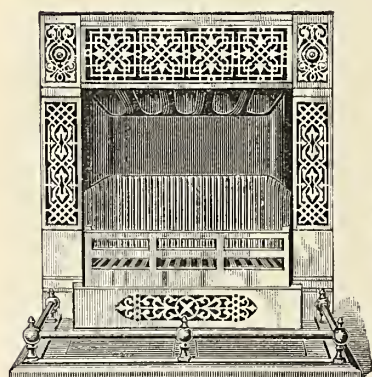
Warrensburg, Ill.—Messrs. Perry, Deal & Co., of Peoria, have prepared plans for C. J. Off for a three-story elevator building; cost \$4,000; work to be commenced at once.

Wauwatosa, Wis.—Architects Edward V. Koch & Co., of Milwaukee, report: For T. T. Greenwood, suburban residence, to cost \$16,000; Chas. Kraus, carpenter; W. Taddy, mason.

White Pigeon, Mich.—The Presbyterian Society are to erect a church building early in the spring; to cost \$4,000 or \$5,000; plans have not been made as yet; Rev. J. Emory Fisher is pastor and secretary of the building committee; S. J. Osgood, of Grand Rapids, architect; brick, lumber, roofing, heating apparatus, glass, etc., will be wanted soon.

Wichita, Kan.—Architect Geo. A. Masters has prepared plans for L. M. Crawford, of Topeka, for a three-story opera house, 60 by 145 feet, to be built of brick and stone, trimmed with terra-cotta, galvanized iron cornices, tin roof, iron channels, beams, etc.; hardwood finish and tiling, skylights, stained glass, closets, steam heat, mantels, electric bells, speaking tubes, etc.; electric lights, fireproofing, etc.; cost \$50,000; building to be commenced March 1, 1887.

The Jackson Heat-Saving and Ventilating-Grate.



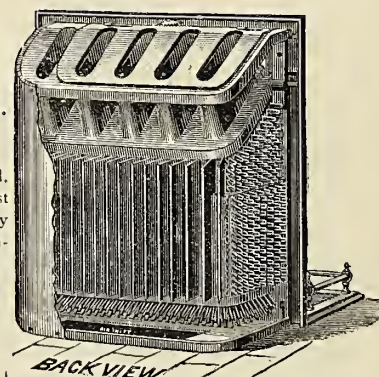
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Greatest variety of rich and chaste designs in plain or oxidized Iron, Steel, Nickel-Plate, Electro-Bronze, Solid Brass, or Bronze. Largest rooms in coldest climates thoroughly heated. Out-door air warmed by the heat wasted in ordinary grates, and introduced, producing perfect ventilation and equable temperature, without drafts. In use everywhere. Illustrated Catalogues.

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A MONTHLY JOURNAL DEVOTED TO WESTERN INTERESTS.

VOL. VIII.

SUPPLEMENT—JANUARY, 1887.

No. 10

St. Louis Hydraulic Press Brick.

THE increased wealth of the country has created a demand for building materials of better quality than was used in former years, and architectural development and progress have kept pace with this demand, the tendency being toward an increased finish and elaboration of design and construction. It is but a few years since straight bricks, smooth in face, with sharp corners, were sought; then uniformity in color was exacted, which led to the assorting of brick to upwards of a dozen shades.

Then ornamental brick was called for by the architects, who saw that ornamentation could be obtained through properly designed and molded brick better than could be secured through the use of stone, till at the present day in almost all parts of the country, especially in the West, the use of pressed brick has, to a great extent, superseded that of stone. The pioneers in the manufacture of pressed bricks in the West were the Hydraulic Press Brick Company, located at St. Louis, Missouri. Their yards were started near the outskirts of that city soon after the close of the war, but it was almost ten years later that the increased use of these bricks called for a large extension of the company's plant. The rebuilding of Chicago, following the great fire, caused such a demand that an agency was established in that city,

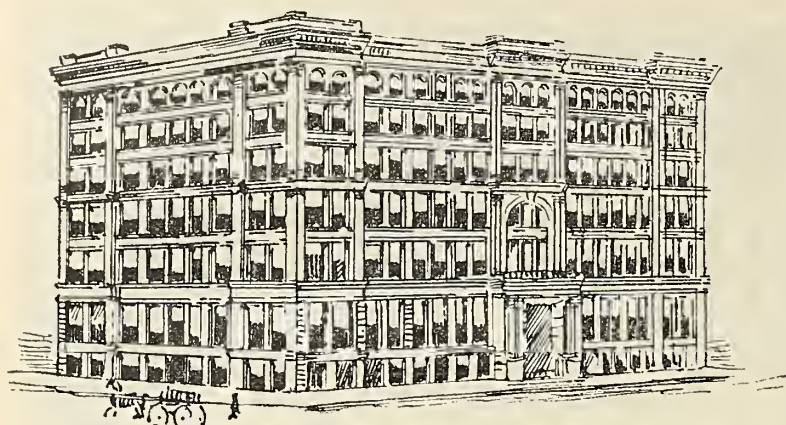
which was placed in charge of Mr. J. J. Lockwood, and through him the company has since supplied the material for some of the largest brick buildings on the continent. It is deemed appropriate that the architects recently in attendance at the convention of the Western Association (who spent many days inspecting buildings constructed of St. Louis pressed brick) as well as others throughout the country, who have seen and admired these superb brick, should know something of the works where they are manufactured. A special representative was therefore sent to St. Louis, where the company's offices and yards were visited.

The offices are located in the Turner Building, on Eighth street. The officers are, E. C. Sterling, president; H. W. Eliot, secretary. In company with Mr. Eliot, our representative visited the yards. They are five in number, and located at short distances from each other, about five miles from the center of the city. Yard 1 is the oldest, and here the first brick was made in 1868. Yards 3 and 4 were then built, the shipping being largely done



INSURANCE EXCHANGE BUILDING—BURNHAM & ROOT, ARCHITECTS.
St. Louis Hydraulic Press Brick.

from yard 4, where 2,800 feet of private switches enable cars to be rolled in the yards to the kilns, where the brick are loaded and sent without rehandling to any part of the country. Yards 5 and 2, situated about half a mile from the other yards, are devoted exclusively to the manufacture of



FIRST NATIONAL BANK, CHICAGO—BURLING & WHITEHOUSE, ARCHITECTS.
St. Louis Hydraulic Press Brick.



RYAN HOTEL, ST. PAUL—J. J. EGAN, ARCHITECT, CHICAGO.
St. Louis Hydraulic Press Brick.

pressed and molded brick, 85 acres, an inexhaustible quantity of fine clay ground, being set apart for their use. Of these two yards, 5 is the larger, containing, as it does, two presses, twelve patent and four common kilns. There are eight patent, and six common kilns in yard 4; seven patent and three common kilns in yard 3; seven common kilns in yard 2, and eight common kilns in yard 1. There are 3,000 feet of side track and switches at yard 5. All this track is devoted to the exclusive use of the company, and empty cars are placed here at their disposal, so as to avoid any delay in the shipping of any quantity of brick called for.

While in the construction of a

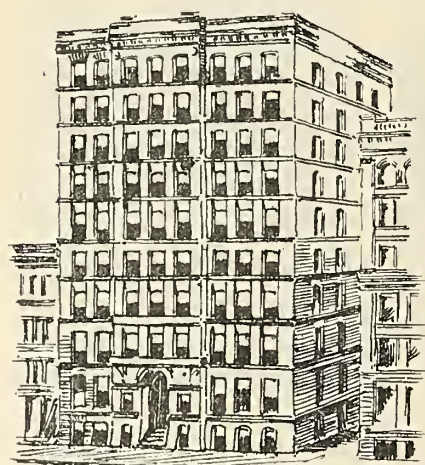
brick-making plant everything is for utility and nothing for show, the different processes are most interesting even to the casual observer. Aside from the possession of the most superb clay, it is to the presses and kilns that the excellent quality of this company's bricks is due. The presses are all driven by hydraulic power.

There are two presses at yard 5, one producing five, and one ten bricks at a time, and each of the other yards is equipped with a ten-brick press. The ten-brick presses turn out forty-six hundred brick an hour, and the five-brick presses turn out twenty-five hundred brick an hour. The same presses are used for making

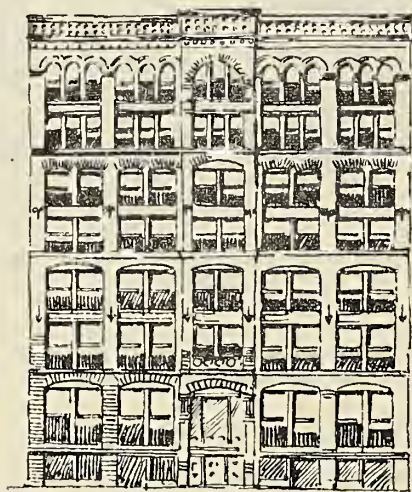
common, molded, and pressed brick.



COMMERCIAL BANK BUILDING, CHICAGO—JAFFRAY & SCOTT, ARCHITECTS.
St. Louis Hydraulic Press Brick.



MONTAUK BLOCK, CHICAGO—BURNHAM & ROOT, ARCHITECTS.
St. Louis Hydraulic Press Brick.



ILLINOIS BANK BUILDING—BURNHAM & ROOT, ARCHITECTS.
St. Louis Hydraulic Press Brick.



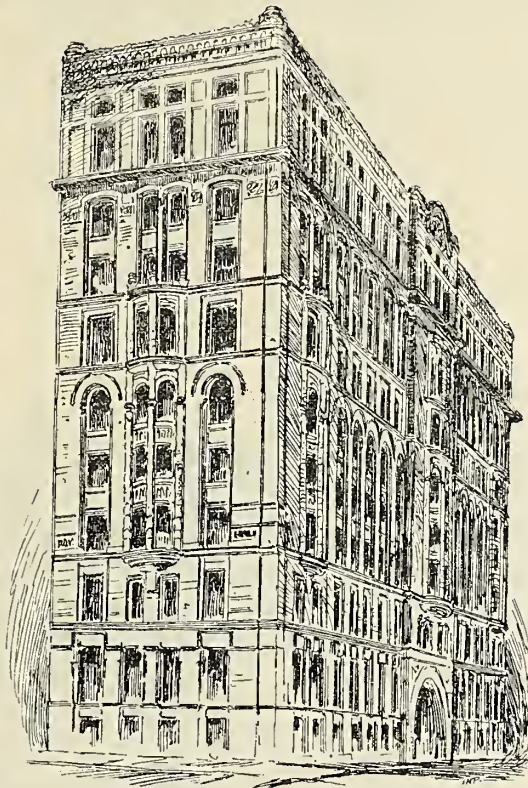
CALUMET BUILDING, CHICAGO—BURNHAM & ROOT, ARCHITECTS.
St. Louis Hydraulic Press Brick.

The monthly output is now about six million common brick, and a million and a quarter pressed and molded bricks.

The kilns of the company are most elaborate affairs, the idea in their construction being to distribute the heat equally at top and bottom. They are patented, but are too expensive to be used in any but the largest works. They are made entirely of firebrick, and cost from four to five thousand dollars each. About sixty per cent of the brick is available as face or pressed brick; the remainder of the burning is good, hard brick, there being absolutely no loss, so evenly is the heat distributed. The kilns average about thirty feet in diameter, by eighteen feet high, and hold about one hundred thousand brick. The actual burning time is from three to five days, though about ten days is consumed in the process of burning and cooling off. By an arrangement of pipes the hot air is distributed from one kiln to another, so that none of the heat from the burning kilns is wasted, but is turned into the green kilns. This enables the brick to be set direct from the machines, saves handling and consequent breakage, and dries the brick slowly without cracking. After the drying is completed the fires are built, and the heat can be raised at once to the desired temperature. The smoke is carried to a central stack, and this is built very high in order to secure a strong draft, as the kilns are down-draft in construction. For this reason it is noticeable that the brick at the top of the kiln are hardest burnt.

Connected with yard 1, are extensive machine shops, employing eight machinists and three blacksmiths, the company making all its own dies and repairs.

One hundred and sixty-one head of mules are used for teaming, and about five hundred men are used about the works. As the clay season is over, no work is being done on the clay-hills. It is esti-



PHOENIX INSURANCE BUILDING—BURNHAM & ROOT, ARCHITECTS.
St. Louis Hydraulic Press Brick.

ated there is enough clay under shelter to make thirty-six million brick, and three of the yards with patent kilns will run all winter.

The brick made by this company are being sent from Canada to Texas, and from Indiana to Utah. The illustrations given, show a few of the large buildings built of St. Louis hydraulic press brick, and it is worthy of note that the government architect is now specifying this brick.

In the sheds are stored about four hundred thousand molded and ornamental brick, comprising seventy-five different patterns, this number being one-half the quantity that will be on hand for delivery next spring. The company will have three million pressed brick in stock in St. Louis.

Messrs Lockwood & Kimbell, who are the sole agents of the company in Chicago, have sold during the year 1886, four million of this company's pressed and molded brick. Their warehouse is located at 2399 Archer avenue, and offices at 162 Washington street. A large stock is carried at their warehouse, there being now on hand two hundred thousand bricks, enabling them to fill all orders with promptness and dispatch. Among the most notable buildings constructed of this brick, are the Rialto, Calumet, Insurance Exchange, Phoenix Insurance, Montauk Block, First National Bank, Illinois National Bank, and other large buildings, cuts of which are shown in this number.

In order to show the stability and crushing strength of these pressed brick, the following test has been made, and is submitted in full.

This test was made by the Chicago Forge and Bolt Company, at the order of the Hydraulic Press Brick Company's agents in Chicago, Messrs. Lockwood & Kimbell, from bricks taken from general stock without selection. Appended are their signed statements:



WEST HOTEL, MINNEAPOLIS—L. L. BUFFINGTON, ARCHITECT.
St. Louis Hydraulic Press Brick.

REPORT OF TESTS MADE ON BRICK FOR LOCKWOOD & KIMBELL, OF CHICAGO,
BY THE CHICAGO FORGE AND BOLT COMPANY.

TEST No.	MARKS.	STRAIN AT FIRST FRACTURE.	ULTIMATE STRENGTH.	TEST No.	MARKS.	STRAIN AT FIRST FRACTURE.	ULTIMATE STRENGTH.
1	A. No. 3	62,400	114,000	13	Z. A.	19,200	132,000
2	A. No. 2	24,000	168,000	14	Trenton.	32,400	216,000
3	A. No. 1	90,000	192,000	15	Philadelphia.	12,000	132,000
4	H. P. No. 8.	312,000	390,000	16	Milwaukee.	13,200	126,000
5	H. P. No. 6.	216,000	324,000	17	Baltimore.	15,600	192,000
6	H. P. D. R.	180,000	342,000	18	Chicago.	10,800	114,000
7	H. P. P.	252,000	432,000	19	Toledo.	26,400	102,000
8	No. 8.	28,800	192,000	20	P. & K. Ind.	36,000	156,000
9	I. 7.	30,000	168,000	21	H.	56,400	132,000
10	S. 9.	78,000	138,000	22	A. M.	57,600	123,600
11	C. O. B. 4.	24,000	156,000	23	Union.	10,000	210,000
12	M. 10.	12,000	114,006	24	T.	4,800	258,000

CHICAGO, March 23, 1886.

I hereby certify that the following is a true and correct description of the bricks furnished by me to the Chicago Forge and Bolt Company, this day to be tested:

A. No. 3, known as Anderson No. 3, } were brick from the Chicago
A. No. 2, " " " 10, } Anderson Press Brick Co.
A. No. 1, " " " 14, }
H. P. No. 8, } were Press Brick
H. P. No. 6, } from the Hydraulic
Press Brick Com- }
pany, St. Louis.
H. P. D. R. was common Dark
Red Brick from Hydraulic
Press Brick Company, St.
Louis.
H. P. P. was Paving Brick from
the Hydraulic Press Brick
Company, St. Louis.
Z. A. was Re-pressed Brick from
Townsend & Co., Zanesville, Ohio.
Trenton was Re-pressed Brick from
Fell, Roberts & Co., Trenton,
New Jersey.
Phil. was Re-pressed Brick from the
Peerless Brick Co., Philadelphia.
Mil. was from Burnham & Co.,
Milwaukee.
Balt. was Re-pressed Brick from Burns,
Russell & Co., Baltimore.
Toledo was a Stock Brick from the
Toledo Brick Co.
P. & K., Ind., was from Purington &
Kimbell Brick Co.
H. was from W. E. Hinchliff & Co.
T. was from Tiffany Brick Co.,
Momence, Ill.
(Signed) J. J. LOCKWOOD.

CHICAGO, March 23, 1886.

I hereby certify that the following is a true and correct description of the bricks furnished by me to the Chicago Forge & Bolt Company, this day to be tested:

No. 8, was a Semi-dry Clay Brick
from Itner Bros., St. Louis, made
by the "Andruss" Machine.
I. 7, was the same.
S. 9, was a Semi-dry Clay Brick from
the Standard Press Brick Co., St.
Louis, made by the "Kennedy"
Machine.
C. O. B. 4, was a Semi-dry Clay
Brick from the Columbus, Ohio,
Brick and Terra-Cotta Co., made
by the "Whittaker" Machine.
M. 10, was a hand-made Re-pressed
Brick, made by the Menomonie
Pressed Brick Co. of Menomonie,
Wisconsin.
A. M. was a Dry Clay Brick from
Anoka, Minn.
Union, was a Tempered Clay Brick,
from the Union Press Brick
Works, of St. Louis, made by the
"Sword" Machine.
(Signed) H. W. ELIOT.

I hereby certify that the above is a true and correct statement of tests made by me this day with the testing machine of the Chicago Forge and Bolt Company.

[Signed]: C. WEATHERSEN,
Superintendent.

CHICAGO, March 23, 1886.



PULLMAN'S OFFICE BUILDING—S. S. BEMAN, ARCHITECT.
St. Louis Hydraulic Press Brick.

This brief sketch of the largest pressed brick works in the United States is given, that architects may have positive knowledge of the facilities of the Hydraulic Press Brick Company of St. Louis, for filling any order of any size or description from any part of the country at the shortest notice. Special designs in ornamental brick can be executed, and the com-

pany's stock patterns are continually increasing in number. It is no longer said that the use of pressed brick is a fashion. The forms of use may change, but the unquestioned stability of the material, and its plastic conformity to architectural forms, will always contribute to its increased use and favor.



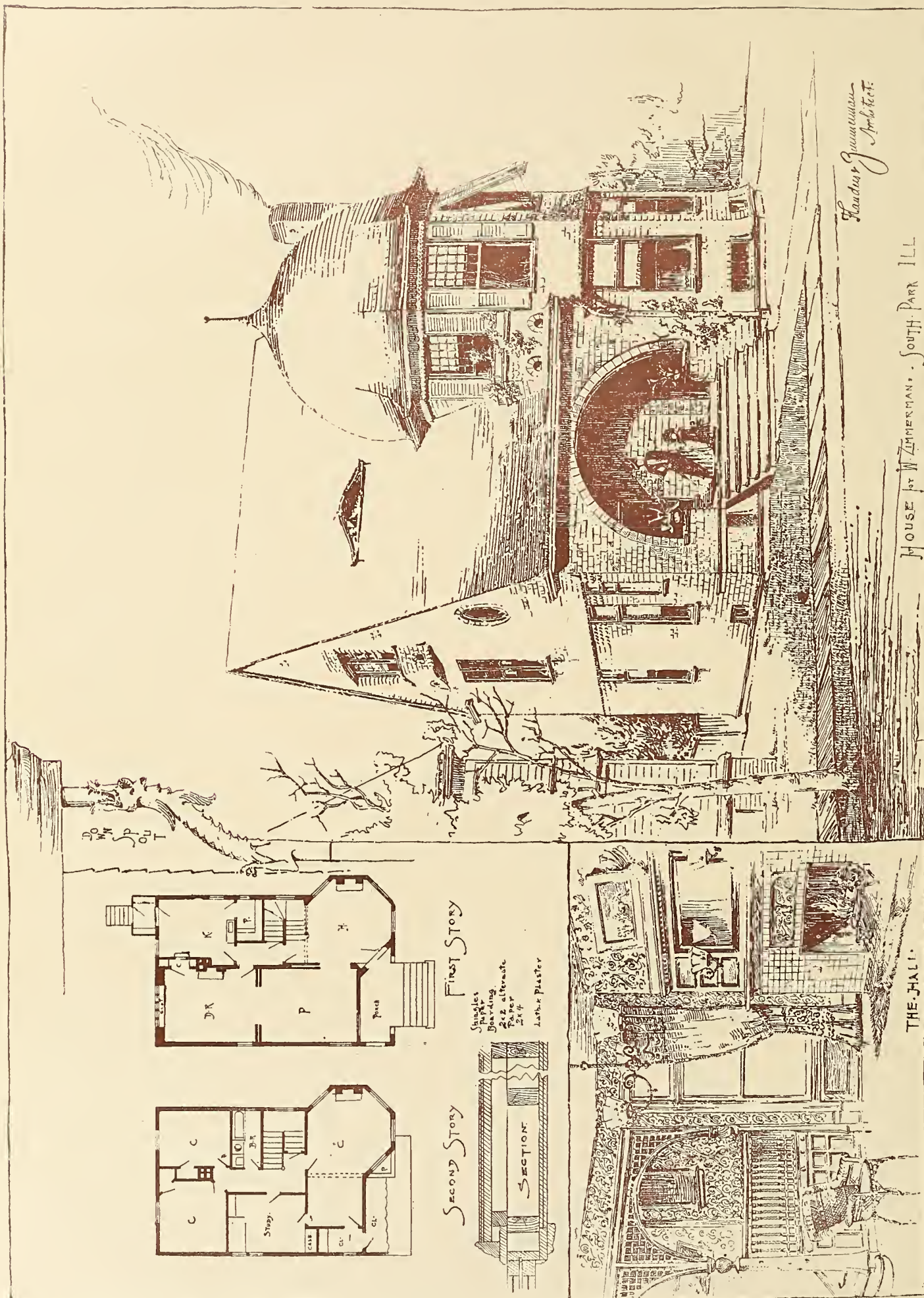
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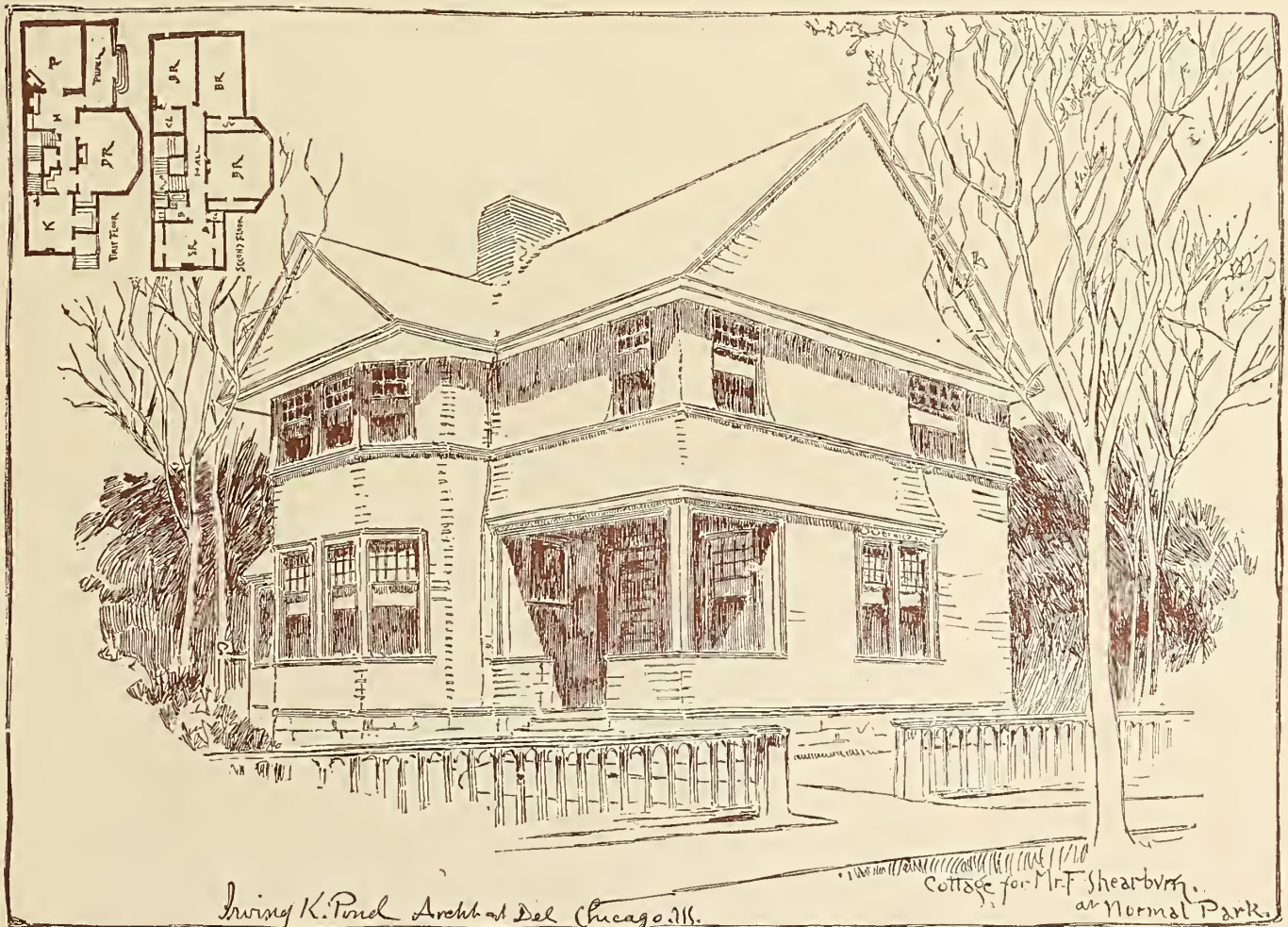
THE RIALTO OFFICE BUILDING, CHICAGO.

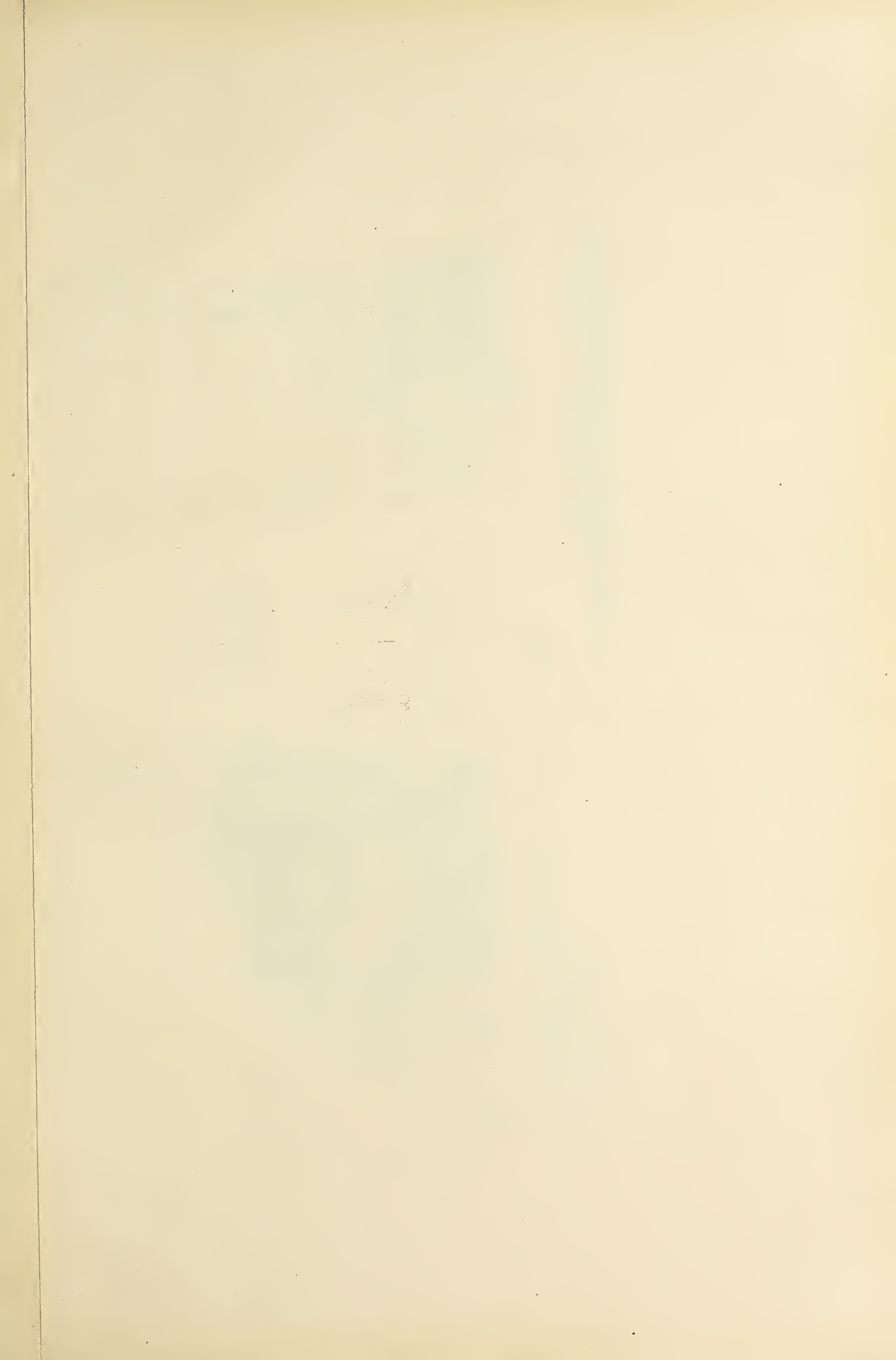
BURNHAM & ROOT, Architects.

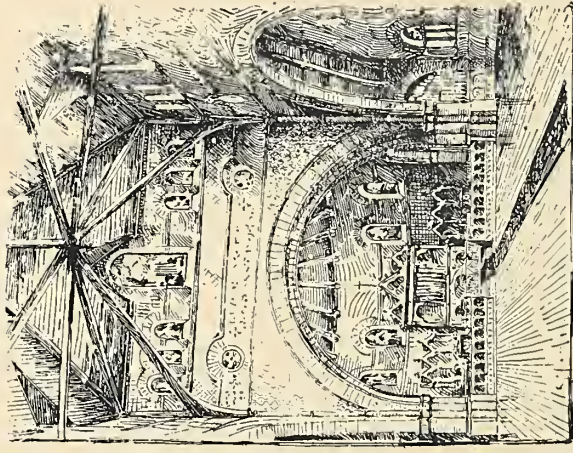
Specimen of Ives' Process by the CROSSCUP & WEST ENGRAVING Co., 907 Filbert street, Philadelphia, Pennsylvania.



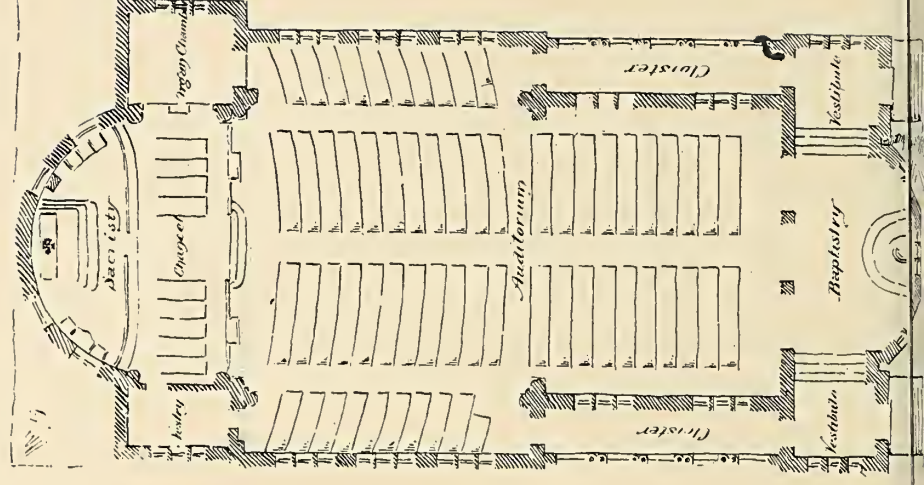
RESIDENCE OF J. S. KURTZ, ESQ.
CANTON, O.
Guy Tilden, Archt.







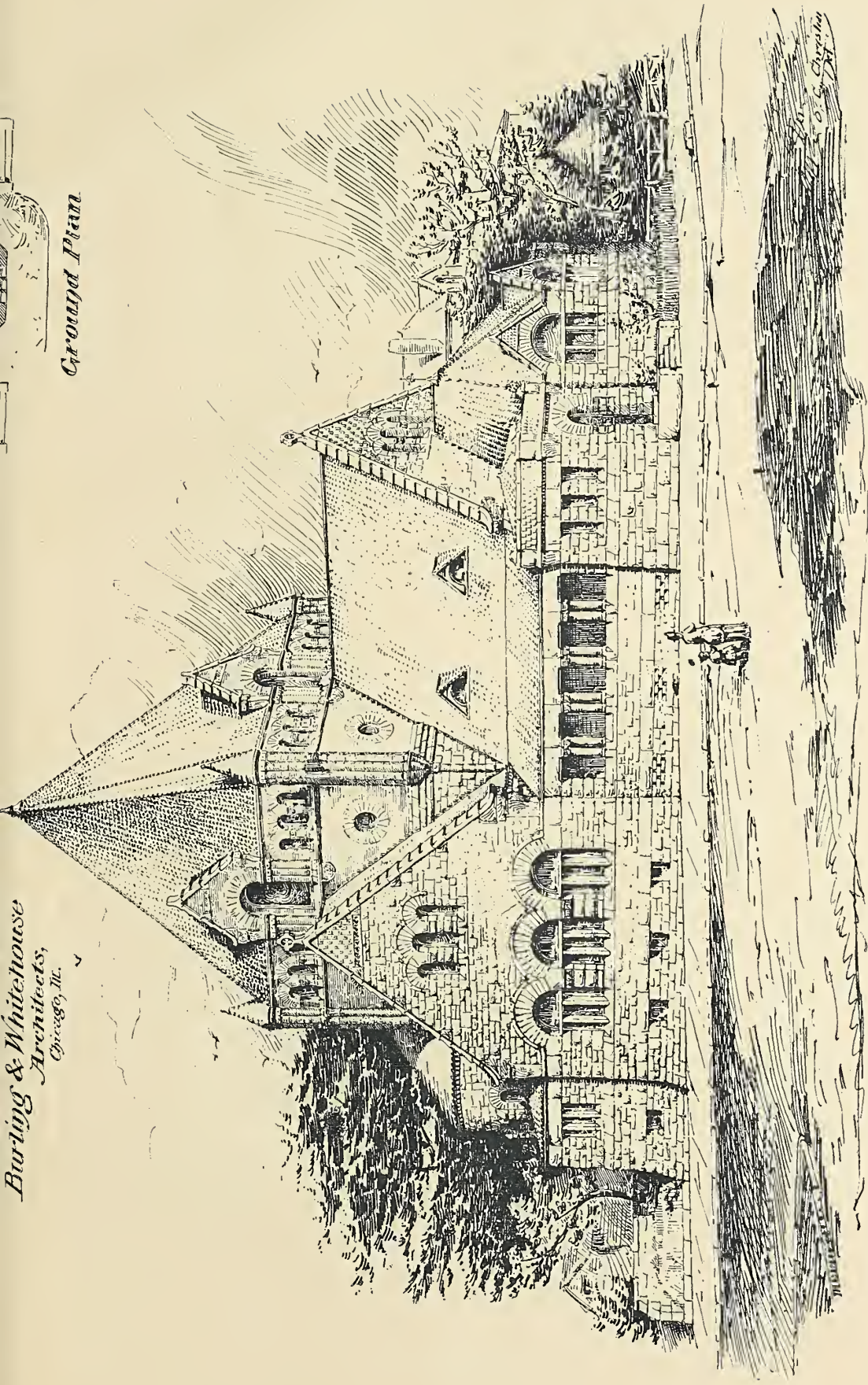
Anterior of Lantern & Chancel

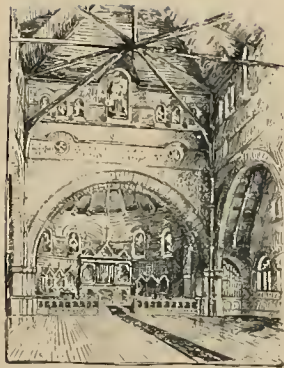


Trinity Church

Burling & Whitehouse
Architects,
Chicago, Ill.

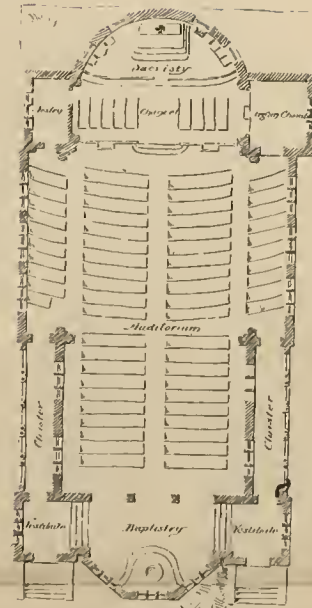
Ground Plan



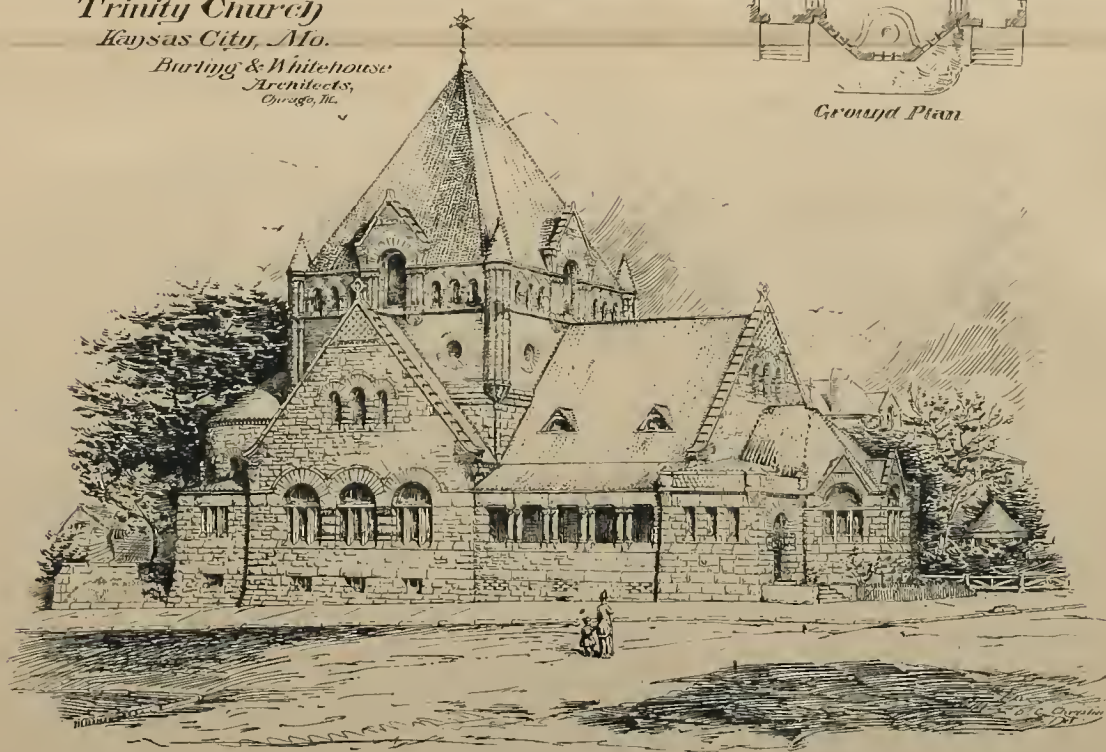


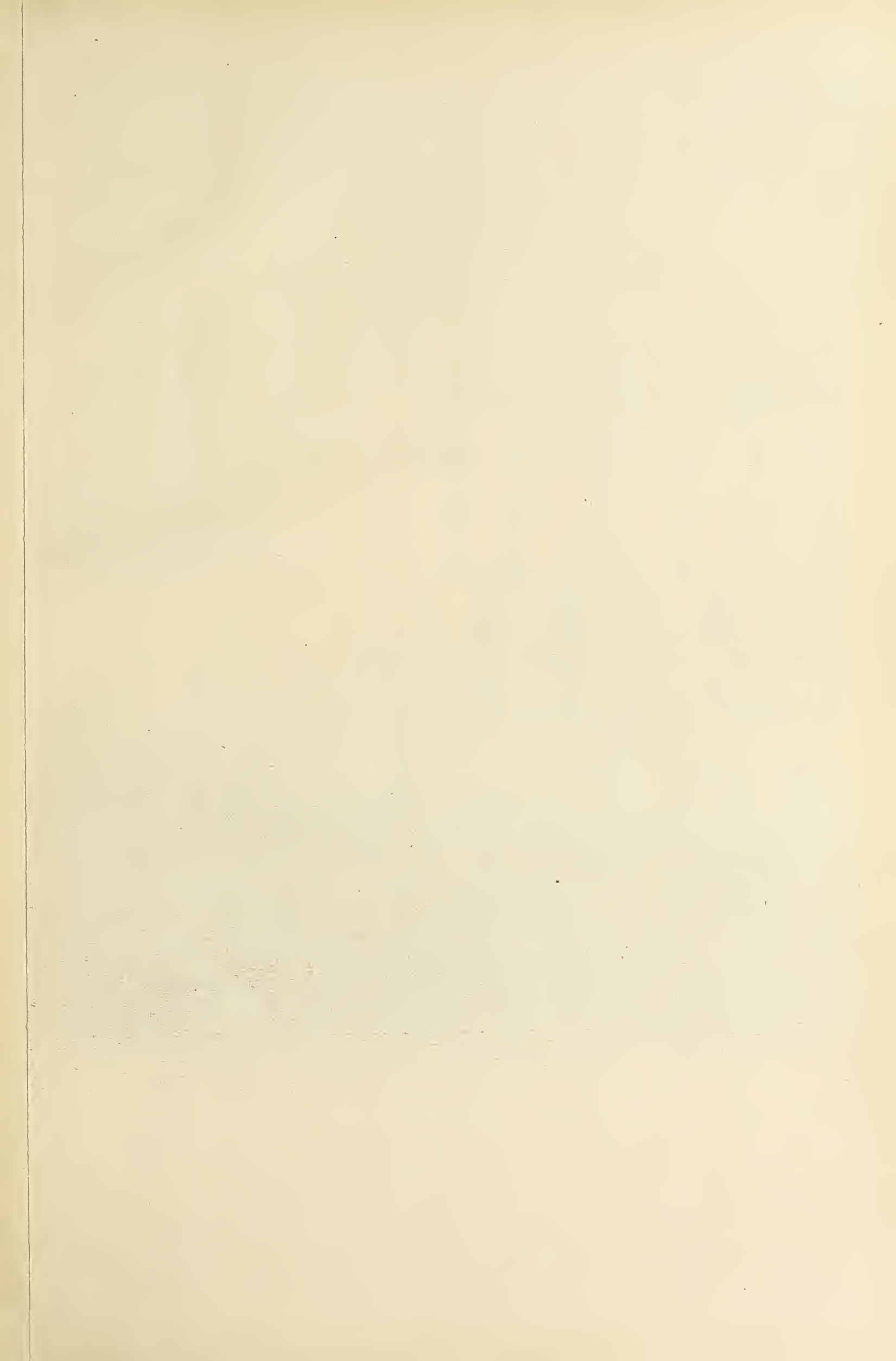
Interior of Lantern & Chancel

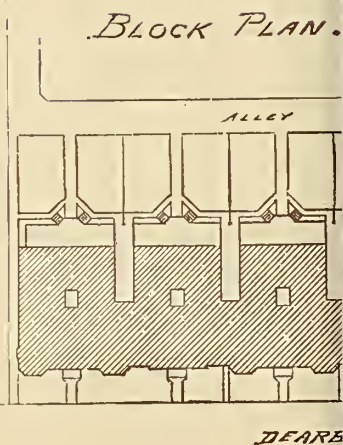
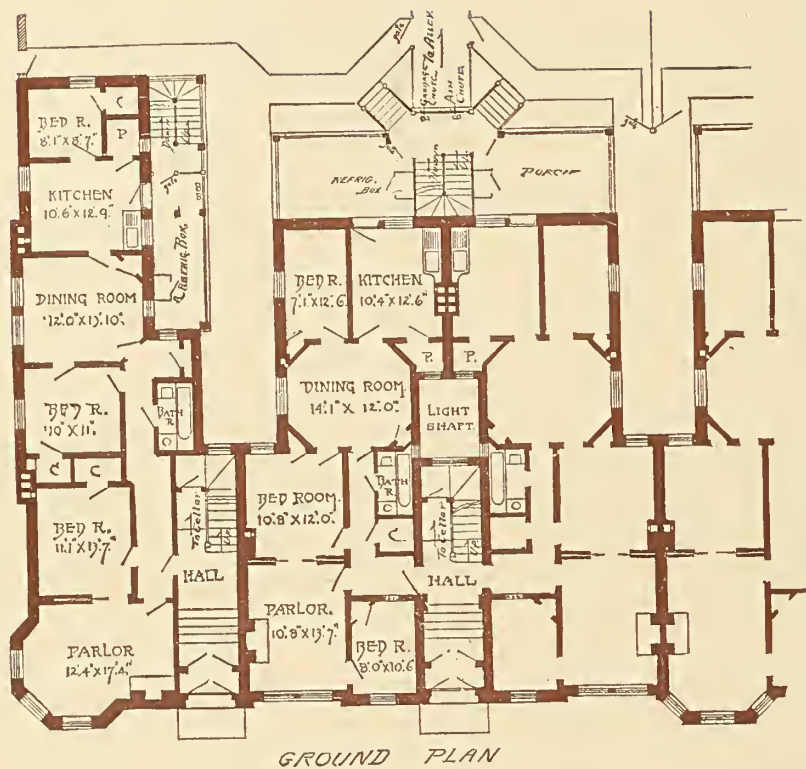
Trinity Church
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Burling & Whitehouse
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Chicago, Ill.

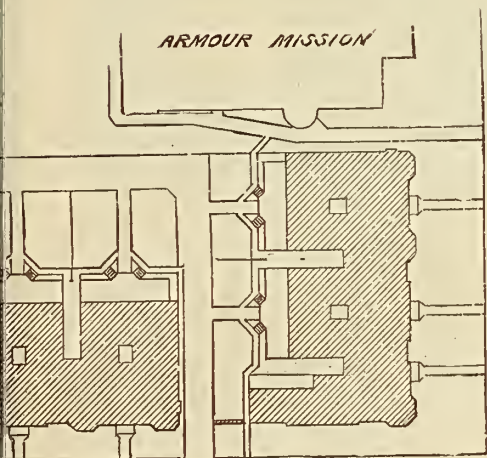


Ground Plan







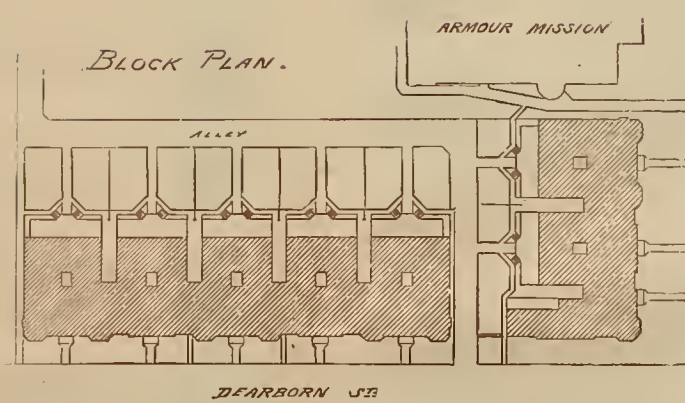
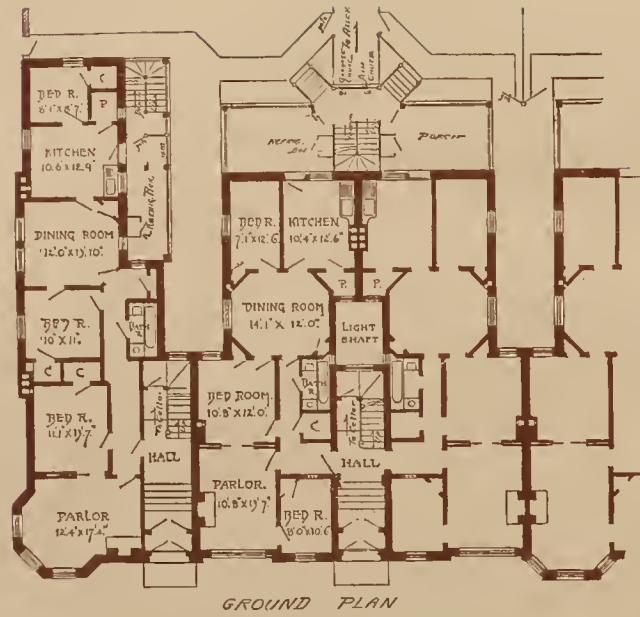


33rd St.

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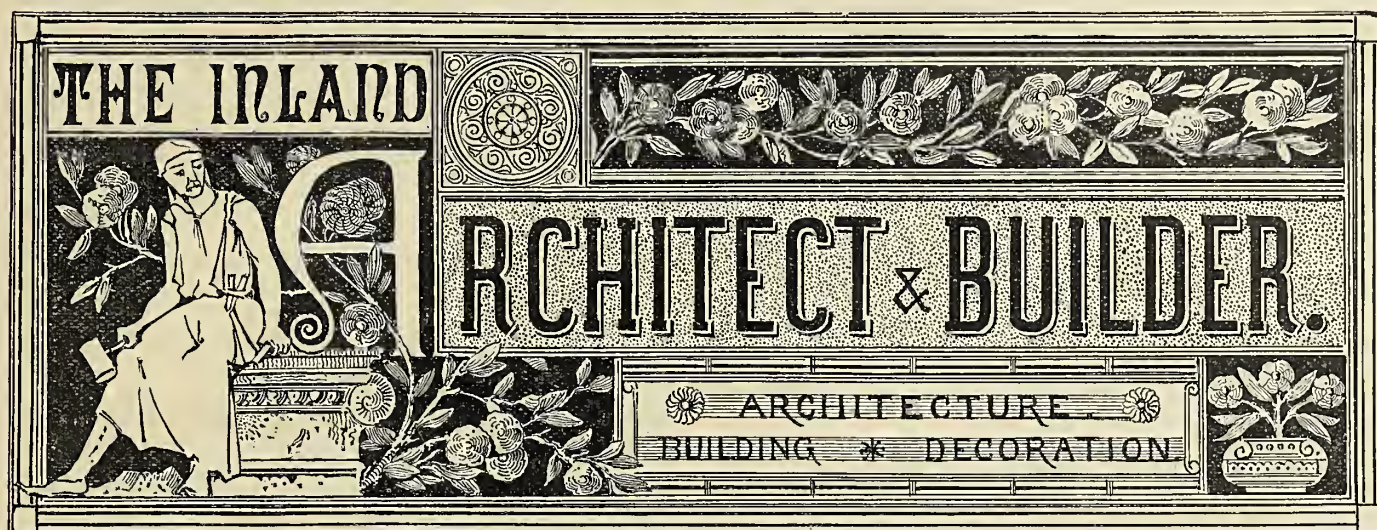
FLATS FOR
THE ARMOUR MISSION.
PATTON and FISHER,
ARCHITECTS,
CHICAGO —





FLATS FOR
THE ARMOUR MISSION.
PATTON and FISHER,
ARCHITECTS,
CHICAGO —





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A MONTHLY JOURNAL (WITH AN INTERMEDIATE NEWS NUMBER) DEVOTED TO WESTERN INTERESTS.

VOL. VIII.—Nos. 11-12.

CHICAGO, JANUARY, 1887.

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INTERMEDIATE NEWS NUMBER,

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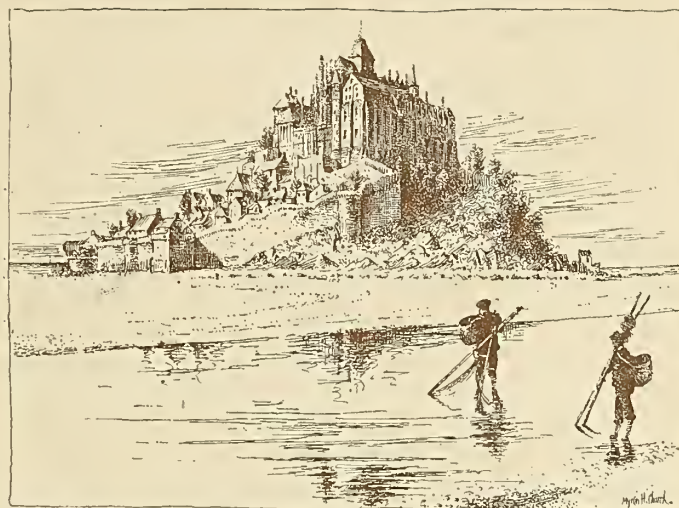
ASSOCIATION AND BUILDING NEWS.

PUBLISHED BY

THE INLAND PUBLISHING COMPANY,

CHICAGO, ILL.

Illinois State Association of Architects.



THIS intermediate news number includes Numbers 11 and 12 of Volume VIII and completes that volume and the fourth year of our publication. Several important changes, which we hope will add to the value and attractiveness of this journal, will shortly be inaugurated, particulars of which will appear in our regular edition for February.

AT a meeting of architects held on Saturday, January 22, at Louisville, steps were taken toward the organization of a state association of Kentucky architects. Invitations are being sent out to the architects of that city and state to attend a meeting at Louisville, on February 4, when a permanent organization will be effected.

THE Bill for Regulating the Practice of Architecture was read for the first time in the Illinois Legislature, January 28. This will be followed by the Sanitary Bill, which we print in this edition in full, as revised by the committee, having it in charge. These bills, while formulated and presented by architects, are more in the interest of the public than of the architectural profession, and should receive the full support of every intelligent citizen and legislator.

BUILDERS of the United States are about to organize a national association, and a meeting for the purpose will be held in Chicago, March 29. The convention will be attended by about two hundred representatives from the builders' and traders' exchanges, a full report of the Boston conference, and the plan of organization as outlined there, being printed elsewhere. The movement deserves the active coöperation of all master builders and dealers in building materials.

THE regular monthly meeting, January 8, was called to order at 2:30 P.M., by S. A. Treat (the president not having arrived), who called upon the secretary for the reading of the minutes of the previous meeting.

The Secretary: If there is no objection, I would suggest that we omit the reading of the minutes, as they have already been published in THE INLAND ARCHITECT, and as we have quite a large number of friends with us who will occupy the time with something more important.

The reading was then dispensed with.

Mr. Treat: The object of this meeting is the discussion of the sanitary bill. There has been a committee appointed, of which, I believe, Mr. Baumann is the chairman.

Mr. Baumann then requested the secretary to read the bill section by section, which was done by W. W. Clay. Section 1 was read.*

Mr. Baumann: I wish to inquire if any of the gentlemen present, whether members or guests, have anything to comment upon that. We had this under discussion with Mr. Genung, and I believe we agreed to put it in that form.

Mr. Genung: I objected to it at the time.

President Adler (who had taken the chair): Will Mr. Genung favor us with his views on the subject?

Mr. Genung: During the many conferences that this committee had with me regarding this bill, I believe that at each meeting I objected to striking out the provision which required that the architect be made the most responsible person. That was my first and last, and is still my objection—the cutting out of the architect as being the most responsible person. The majority ruled differently, and, of course, I had to acquiesce. I still have the same objection I had from the beginning.

The President: Having been a member of that committee, and having, perhaps, been more actively engaged in making this particular deviation from the wishes of Mr. Genung in the draft of the bill, it would be well to state the reasons which have led us to adopt a form so different from

* The sections of the bill were read by W. W. Clay, as printed in the report of the previous meeting in December Intermediate News number, page 92. The bill as finally revised by the committee appointed for that purpose, and whose charge it is to bring it before the State Legislature, is printed as a whole on page 118.

that desired by the health department. It was the idea of your committee that the architect was in nowise the principal in any building undertaken; the owner of the building is the principal. A building is erected for the owner, for his use; he is the one under whose final control all operations are carried on, and the architect is merely his agent. If the architect takes out the permit, there is nothing in the bill to prevent him from doing so; but he does so as the agent of the owner of the building. It happens frequently that buildings are erected without the intervention of the architect, or from the plans of an architect not under his supervision. It happens also at times, that buildings are begun from the plans of one architect and under the supervision of that architect, and that afterward they are placed under the care of another architect. Now, in all of these cases the primary responsibility rests with the owner of the building and not with the architect. If the owner of the building is the one who is compelled to take out this permit, no matter what changes are made, whether he has an architect or not, whether his architect superintends the erection of the building or not, no matter whether there is a change made in the person to whom that is intrusted, the responsibility always rests where it should, with the person for whose benefit the building is erected, with the person whose money is interested in the enterprise. It was proposed during the sessions of the committee, and I think I speak for the committee in saying that there was no objection to wording the bill in such a way that the architect might take out a permit that is worded in this way: "It shall be the duty of the owner or other person or persons interested in the contemplated erection or alteration of a building within the corporate limits," etc., "any person, or by their architects or other agents, to take out a permit." I think there would be no objection to that; that would give the actual state of the case. The architect generally would take out that permit in any event, though the owner is the responsible person. Again, we have done away with one of the objections of the health department to this form of the bill. The health department takes it that if the owner were the person who must take out the permit, that if he were a non-resident, it would be difficult to find him, while the architect, being generally a resident of Chicago, could be reached. This objection would hold if it were possible to begin the erection of a building without a permit, as is the case now. The health department now has a similar regulation; but the regulation is in such form that with the authority of the building department, a building can be erected to its completion without any notice whatever to the health department. So I can see clearly the difficulty the health department would have in fighting the owner of the building; the building goes right on; the owner is in Europe, or in New York, or Massachusetts; he cannot be found. There is the permit under which the building is carried on. Under the form of the bill as it is here, a permit from the health department is as essential to the carrying on of the building as a permit from the building department. The building department is debarred from granting a permit until the permit of the health department has been granted. Under these circumstances the owner may be in Europe or Timbuctoo or anywhere else. It is as difficult for an owner in Timbuctoo to erect his building here without a permit as if he were here, and if the owner *is* in Timbuctoo he will be very careful to have an architect in Chicago to take out his permit if he wants to build; and I think the interests of the health department are as fully subserved as if the architect were the person who was compelled to take out the permit. I think it would be an injustice to our profession if we were compelled to take out this permit and retain our responsibility for the building, when, from the very nature of things, we have but a very limited control over it after we have made our drawings.

Mr. Clay: I see two points that might be well to mention, although I am not perfectly sure that they are necessary. In the first place, I think this mysterious "other person or persons" should be authorized by the owner in some way to take his position, and consequently the approval of the health department should be given in writing in some way. There is nothing that refers to either of these two points. This may be technical, but as I understand it, this is a technical proceeding, this whole law. It seems to me those two points should be controlled: First, that the owner shall be the responsible party by having authorized him (the architect), and, consequently, that the health department shall assume the responsibility in granting the request.

The President: It has been understood that this approval should be in writing. It might be possible by eliminating in the first line in the section the words relating to the mysterious other person or persons interested, and adding later: "It shall be the duty of the owner or other duly authorized person interested in the contemplated erection," if there is no objection on the part of the association.

Mr. Ryan, Chairman of Committee of Master Plumbers' Association: In reference to Section 1, it is well known that the plumber is not responsible; it is only the work of the architect, the plans and specifications of that part of the building where our work begins; and for us to be compelled under this law to submit or draft plans for a building, or any part of a building, either for the plumbing or other parts, I do not think it wise, and I hold with our association that we are not the proper persons either to draft or submit plans.

Mr. Clay: I would move that the words "duly authorized" be inserted upon the second line between the words "other" and "person," and that the clause in parenthesis "or the architect or plumber of said owner or person" be stricken out.

The section was then read as amended and adopted.

Section 2 was read.

Mr. Clay: I move that all words after the word "obtained" be stricken out of this clause.

Mr. Baumann: I do not think it necessary to strike them out; put them in and have things done in proper shape.

Mr. Clay: How can this be done unless it is obtained in the manner provided? What difference does it make? It would then read: "No building permit shall be issued by any officer or building department in such city or village before the approval provided for in Section 1 of this act is obtained," and that settles it.

Mr. Stiles: I second the motion. Motion carried.

Mr. Ryan: I am authorized by our association to submit this alteration: That *all* permits shall be taken out by the owner or duly authorized agent:

The President: Of course they are taken out by the owner or duly authorized agent; the question is, whom he authorizes as his agent.

Mr. Ryan: That is in accordance with Section 1?

The President: Yes, sir. There are certain permits, however, that cannot be reached by this ordinance.

Section 3 was read.

Mr. Ryan: In regard to Section 3, our association would recommend two inspections. It is well known to all architects that we first do what is termed the "roughing-in" in the early stage of the building, and afterward when the building is ready we finish the job. It is necessary, and I think very essential, that the building should be inspected after the roughing-in is done, for which we should have 48 hours, and then when the job is completed it should also again be inspected, from the fact that after the roughing-in is done the carpenters come along, the pipes are concealed and they cannot be inspected.

The President: The intention of this is to cover the inspection *after* the roughing-in. Have you anything to propose with reference to this matter?

Mr. Genung: I agree with Mr. Ryan that there should be at least two inspections, one before anything is concealed and the other afterward.

Mr. Baumann: There is nothing to hinder the department from having two inspections, or even three or more; it only says that it shall be inspected.

Mr. Genung: It should be worded so as to specify that the work shall be inspected at some time before the work is done, as necessarily there is some blundering work.

Mr. Baumann: I am of the opinion that the time will come—very soon I hope—when there will be no roughing-in, when everything will be done after the plastering is finished, so that everything must be seen.

The President: Has anyone anything to propose with reference to the suggestion of Mr. Ryan and Mr. Genung? Do any of the members of the association favor the insertion in this proposed bill a provision that in addition to the inspection provided for in this section, which naturally would be after the roughing-in had been done, that there shall be another inspection after the work has been done? It does not state that it shall be the duty of the department to make the inspection, but under the bill the department can make another inspection, while there is nothing in to make it obligatory on their part to have two inspections.

Mr. Baumann: Well, then, I do not see the necessity for providing anything more than the power to inspect at any time they choose, and they can divide it up as they like.

Mr. Clay: I was about to suggest that that might be remedied in this way: "The person executing the plumbing work, or causing its execution in any such building, other than mere repairs, shall, at such time as the work is in condition to be concealed, and before such concealment, notify the said officer of the department of health to the effect and substance," etc.

The President: It does not strike me as though that were necessary.

Mr. Clay: It would cover the objection.

The President: I beg your pardon, but what is claimed here by Mr. Ryan and Mr. Genung, is that after this inspection that is here provided has been made and the work has been concealed and the entire job done, that there shall be an additional inspection; that this inspection which is here provided for, is an inspection that would naturally come in after the roughing-in. Then after that the fixtures are put in and connected, and that after the completion of the work, and before the building is occupied, the department shall make another inspection. Is not that your idea, gentlemen?

Mr. Genung: The intent of the health department was this: To do away with a great deal of poor work, and it does not seem to answer this purpose. A test of the work, in any form, is the object sought by the department. They not only want the plumber compelled to notify the health department, but also want it made obligatory in that act that the health department shall make this test at that time. That can be done better before the fixtures are put in than afterward. Then after the work is completed it wants a second and final test. It must have that many inspections.

The President: It seems to me as though the ground taken by Mr. Genung and Mr. Ryan was sound. It is true that under Section 4 that work can be done in a building and the health department can overlook it. If it is made obligatory first upon the plumber, or parties interested, rather than to notify the health department after the building is completed and before it is occupied, that the work is complete, and then made obligatory upon the health department to make an inspection before the building can be occupied, I think it would be well; it would be to the best interests of the community. While such inspection is permissible under the present wording of the bill, it is not *obligatory*, and I think it would be well if one of the members of the association were to submit an amendment to Section 4, by which a provision is made for a similar notice of readiness for inspection, and a similar inspection to that here provided for after the completion of the plumbing but before the occupation of the building.

Mr. Baumann: I would simply have it submitted to the chair or another committee, and let them decide.

Mr. Boyington: I would like to inquire of Mr. Genung, where he speaks of the test after the work is done, what kind of a test he proposes to put to the plumbing after the work is finished.

Mr. Genung: I would have the test specified by this association in the act and let the act itself determine.

The President: I would say, Mr. Boyington, that that is specified elsewhere—the kind of test to which soil and wastepipes shall be subjected. You have the motion before you, gentlemen, that the committee that has had this bill in charge shall be authorized to make such addition to Section 3 as will provide for an examination and test of the plumbing work after its

completion similar to that which is provided for when in a state of partial completion and before concealment. Does anyone wish to say anything further upon the subject?

Mr. D. H. Burnham: Is it intended that there shall be one inspection, and that that is all there shall be?

The President: The bill now provides specifically for one inspection.

Mr. Burnham: How would it be for a large building, where it is only desired to finish part of it?

The President: The bill, as it now stands, provides specifically for one inspection, but as it is intended to be amended it provides specifically for two inspections, one before any of the work is concealed and another when the work is completed.

Mr. Burnham: I speak of a case like this: I suppose we are finishing a building of several stories, covering a great deal of ground, would it not be possible to have some arrangement so that part of that could be finished at a time. For instance, if you are hurrying a building for a man, you conceal part of his plumbing very much earlier than the rest; otherwise it would delay his building and be not only an annoyance but a large loss in money to the owner not to have that part of the building finished, as he could not be ready to rough-in the other parts for several months.

The President: The section reads "[see Section 3]" therefore if the building is finished in sections, before any part of that work is concealed the department would have to be notified.

Mr. Burnham: That appears to be satisfactory.

The President: Those in favor of the passage of the amendment to Section 3 as stated by the chair will please signify it. Carried.

Section 4 was read.

Mr. Boyington: That provides for all floors or basements provided with a concrete floor? That would not, I suppose, prohibit wooden floors?

The President: No, sir, but there must be concrete 3 inches thick, and you can put anything you like on top of that. But if the association desires it, an amendment might be made to this section to the effect that this is not intended to be construed into prohibiting the use of wooden floors on the top of concrete floors. If there is no objection to the section as read we will declare it adopted. Carried.

Section 5 was read.

Mr. Clay: How about this word "hallways" to be included with an equal proportion? It seems to me that sometimes in our extended hallways it would be a difficult matter to have the area of a light shaft quite as large as is proposed here. I do not know; it may be all right; but I only suggest the difficulty that might sometimes be met with in planning which I think it would be well to remember, that is to say, whether it is necessary to have these halls in a building so thoroughly ventilated.

Mr. Baumann: The health department was anxious to have it so and we thought there was no objection.

Mr. Boyington: It occurs to me that in planning a great many buildings where the halls are spacious and make the area large enough to correspond with that requirement, that it would be difficult to do it; and at the same time it appears to me that halls are generally very well ventilated.

Mr. Pierce: In looking over this act it seems to me that there is more or less ambiguity about it, and I would like to call your attention to some points: "A habitable room in any building;" should it not be *every* habitable room?

The President: That would be well.

Mr. Pierce: And would it not be well to insert "hereafter erected or remodeled?" through that might not be as necessary.

The President: It might be.

Mr. Pierce: In the section I have before me it is worded "not less than one-tenth of the area of the floor space of each room." Is that a misprint, or should it be "such" room?

The President: There may be a number of rooms opening into the same shaft.

Mr. Pierce: An open space not less than one-tenth of the area of the floor space of such rooms?

Mr. Pierce: "And shall have an area which for a three-story building shall equal not less than one-sixth part of the area of rooms and halls thereby to be aired and lighted." Does that mean the rooms on any one floor, or on all the floors? It would make a difference of nearly 300 per cent. Then again, "such minimum size shall receive or have an increase," etc. Such minimum size of what? Window or shaft?

The President: Of shaft. I will say that it was not the intention of the committee that this, in the case of a three-story building, should be the size of one-sixth of the aggregate area of the rooms or halls for a one-story building.

Mr. Pierce: To meet that I offer this as an amendment: A habitable room in any building hereafter to be erected or converted shall have one or more windows of dimension not less than one-tenth the area of the floor space, and an open space or light shaft shall be reserved or established for all such windows, and shall have an area which, for a building of three stories or less, not less than one-sixth, and the light shaft shall receive an increase of five per cent for every additional story of the building.

Mr. Burnham: I suppose the gentleman means by "every habitable room," every room intended for habitation? If he did not, a room might be very habitable and very dirty and still require that ventilation.

Mr. Boyington: I am of the opinion still that the amount of light or window called for there will, in many instances, for a long hall, make your light shafts much larger than you anticipate. It would seem to me well to take the hall question out and apply it to the room.

Mr. Clay: I feel so thoroughly of the opinion of Mr. Boyington in this matter that I shall make an amendment to this amendment, striking out the word "hall." Of course I believe that halls should be ventilated, but you are going to have a great difficulty (I speak from personal experience, and I know) to ventilate lengthy halls in this proportion. In the first place, it appears to me it is unnecessary to ventilate these halls to such an extent, and difficult. I therefore make the amendment.

Mr. Pierce: I second the motion.

Mr. Genung: Our past experience has been that in ventilating a hall, especially in tenement houses where the halls are used in common by many tenants, it is essential and almost necessary that the hall shall be both ventilated and lighted thoroughly. We do not feel that the bill provides for any too much light or ventilation. Do not exclude it altogether; do not leave it as it is now in our ordinances.

Mr. Clay: I think Mr. Genung is very right; it should not be overlooked.

The President: It happens occasionally that there are no rooms lighted from the light shaft and that the hall has no light and no ventilation except what it gets from the well-holes of the stairs, and if there is no opening at the top story through the roof, then the hall is entirely devoid of ventilation; and I presume the point Mr. Genung seeks to cover on behalf of the health department is that some specific agreement be had, and that one-twelfth of the area of the halls be fixed for the minimum for light and ventilation.

Mr. Boyington: Perhaps I overlooked the requirements of the architect in this ventilation at the top of the building. There are some I presume.

The President: That is provided for later on.

Mr. Clay: I think hardly any difficulty arises when it is possible to ventilate a hallway at the top, but the difficulty is in these private hallways, as Mr. Genung expresses himself, in the case of flats. There is difficulty in ventilating them at all. Of course they should be ventilated; there is no doubt of it at all, but exactly the quantity you can give; perhaps his proportion is correct, though I would not like to say so without going into some calculation. The hall in an average flat is two or three times the area of almost any given room.

Mr. Baumann: Suppose you have private rooms here and there, you cannot have a window, you cannot have a skylight; you simply have a transom. I want to ask whether that would not be sufficient?

Mr. Clay: It would not according to this.

Mr. Genung: As Mr. Clay states, and we all know, with several tenants on one floor in a large flat building, they object to having any opening whatever in connection with their apartments. They do not care how many come into the other apartments, but they do not want it in theirs. Now, do not let the hallway be omitted altogether.

Mr. Baumann: There are two kinds of hallways, one the general hallway, and then comes the little private hallways. I would like to know if this little private hallway could not be ventilated by transoms?

Mr. Genung: Hallways controlled by one person, or one tenant, need not be embodied in this bill; it is the common hallway, used by several persons, which persons object to having any opening from their hallway into their apartments. Now, let us provide a means to ventilate that hallway.

The President: Gentlemen, you have heard the motion to amend the substitute offered by Mr. Pierce by striking out the word "hallway," and "halls" wherever they occur.

Mr. Clay: I would like to withdraw that amendment now that I understand what Mr. Genung means, and say "public or general hallways," instead of the word "hall."

The President: The amendment having been withdrawn, the original motion of Mr. Pierce comes up.

Mr. Clay: I move that the words, "and public or general hallways" be inserted between the words "and" and "thereby" in the amendment made by Mr. Pierce.

Mr. Boyington: It appears to me that there is more in this section than perhaps at a glance we would think of. We ought not to pass it over in a hurry. It seems to me that if there is such a thing as postponing it, and appointing a committee to figure it out, it should be done. I would make the motion that this be referred to a committee of three or five, as the chair may state, to report at another meeting. We evidently are not going to do it all at this meeting, and have the thing figured out for a three to a ten-story building, and refer it back to the old committee.

The President: I will say that the committee has looked into that matter, and has done some figuring on the areas of these light shafts, and it has found that the area—I do not think it was carried as far as a ten-story building—for a six-story building say, was not excessive. We had in mind the increase in proportion to the area of the number of rooms, and the committee has really considered that point very carefully. I would call attention, Mr. Boyington, to the fact that we will have to hurry this matter, so as to bring it before the legislature at as early a date as possible. We ought to have a special meeting, and if Mr. Boyington would so word his motion as to fix a date for such special meeting at which the matter is to be considered it would be well. Do you wish to make your motion in that way, Mr. Boyington?

After some further discussion of the point, Mr. D. H. Burnham said:

Mr. Burnham: I have not very much hopes of this bill passing in its voluminous form; I have not very much hopes of any bill passing, no matter how good, in so voluminous a form as this is. Legislators are growing more and more conservative it seems to me in regard to passing bills with which they are not acquainted. If there are questions about which there is some doubt, and which would involve very much alteration from the present methods, it seems to me these questions had better be settled by stripping the report entirely for the present of them. If this question is not thoroughly understood, if it cannot be agreed upon, and if it cannot be put in such reasonable shape as to convince everybody at once that it ought to pass, then it seems to me that for the present it would be a wiser course for the health office and for ourselves to let it drop entirely, rather than to have something which is complicated, and which has a great deal of opposition among men of practical knowledge. Now, there is a point in regard to this thing which has come into my mind which has led me to speak as I do, and it will impel me to make the motion which I refer to. I do not think a shaft opening at the top alone is a good ventilator. It is a good one as against no shaft at all, but it does not do the work entirely. It does not get rid of the carbonic gas which must lay in the pocket at the bottom. We will suppose, for

instance, that the windows are left open in the lower shaft, and also in the upper one during the day, and that the people in the lower part of the house have had their doors closed all day; we now suppose that the people in the lower part go into this room to sleep, and it follows to a certainty that there will be an undue accumulation in this room of carbonic acid gas, so that the mere opening of the shaft at the top, although it may help it some, won't be all there is of it, so that at some time I have no doubt the health department will feel itself called upon to improve that section as they desire to have it. They would feel that we ought to have an absolute circulation of air through that shaft which would clear it out entirely. I do not think we are ready to take a radical stand upon this thing, because so many feel in doubt as to what they want to do. In view of these facts, I move that the clause in regard to air shafts be stricken out of this bill for the present. The motion was seconded.

The President: It has been moved and seconded that the clause relating to light shafts be stricken out from the proposed bill. I think it would be as well if the chair would speak with reference to this again, and state the sentiments of the committee, and a little history of the bill, beginning with reference to what has been said by Mr. Burnham as to the voluminous character of the bill. I would inform the association on behalf of the committee, that when this bill was presented to us by the health department, it had about twice the number of words it has now. It has been the constant effort of the committee to cut down the bill. Next I will say with reference to light shafts that that is one of the vital points involved; that if we permit the persons who erect tenement houses or residences to endeavor to ventilate them, as they call it, by windows opening from one room to another, or from a "boxy," stuffy hall, that we will perpetuate a system that is subversive to every consideration of good construction or good planning. It may be that a shaft opening at the top is not the best means there is for ventilating a building, but it is a great deal better than no ventilation at all. Unless we make this part of the act there would be nothing, for instance, to prevent a person from taking a space the size of that covered by this building,—125 by 150, for instance—and divide the whole of that into rooms without any light or air except what is gained from the outside walls, and having an enormous area in the center of perhaps ten, fifteen or twenty rooms on each floor with no communication whatever with the outer air except by windows opening into another room. Now, that certainly is something we ought to prevent. We ought to compel a man who would undertake to divide a space of that size to provide at least some communication with the outer air; and that is what this is intended to do. I will give you an instance from my own experience: About six months ago a client of mine for whom I had erected a building a few years ago, in which there were a number of lofts of about 50 by 100 feet, if I remember right, with light only from the ends, came to the conclusion that he could get a much larger revenue, if, instead of renting it for lofts, he would divide it into rooms and rent those rooms for lodging houses. I told him not to do so, as it would be necessary to provide a number of light shafts and that the number of rooms would be much smaller. But he insisted upon it that he would divide that into rooms without providing any light shafts, and there are now in that place—this work was executed without my assistance—on one floor eight rooms and on another floor nine rooms that have no communication with the outer air. Now, an ordinance such as this, even if it does not provide the best means for ventilating that place, would at least have prevented him from having that lot of tight boxes and renting them to lodgers. I hope and trust that Mr. Burnham, whose good judgment we all know and admire, will withdraw his motion.

Mr. Burnham: We will suppose the bill is brought before the legislature. I have no doubt at all there are a great many men who will criticize that clause as they will no other. A legislator will come to him and inquire what he thinks of the bill. He will say the bill is worth nothing. He will do it on that clause; because he will foresee that it will confine him in very close quarters in his planning of cheaper buildings. I do not want to see the bill fail of passing; I do want to see the bill pass; but I want to see this body and the health department ask for the vital things at first, and if once the plant commences to grow I think we can graft on afterward all that will be necessary. Where there are items on which we are all agreed, let those remain in the bill and have them forced through, then we will soon have a framework on which we can load on everything that is necessary. I think the matter of plumbing and some other matters will be enough to put in this bill to carry it through. Now, you can see there is objection to this; the gentlemen here do not like it. Now, the question is, won't that defeat it?

Mr. Genung: This bill is to take the place of a very short one passed in 1881, and I will admit we had a great deal of difficulty in getting that bill passed, because it was a revolution in lighting and ventilating. . . . But since then members of both houses of our legislature have come to us and said that this was so good that if we would frame another and a better one they would see that it went through. . . . I do hope that the proposition to strike out that section in regard to lighting hallways, etc., will not be adopted.

Mr. Clay: I move the motion be laid on the table. Carried.

The President: We now come to the substitute for Section 5, offered by Mr. Pierce. Carried.

Section 6 was read.

Mr. Pierce: I wish to say in regard to that, first, the word "permanently" ventilated. It seems to me in many cases where skylights are used and permanent ventilation through a skylight of $\frac{1}{2}$ th part of the area, and be left open at all times, that that would be a serious matter in practice. An opening of that kind would allow a large amount of heat to escape, and would, in many cases, be a nuisance. I would propose an amendment to strike out "permanently," and also between the words "building" and "shall" in the first line insert "room or rooms not otherwise adequately ventilated."

After considerable discussion, Mr. Boyington, at the suggestion of the chair, made the following motion:

Moved that Section 6 be re-referred to the committee, with instructions to so amend

it as to confine the clause providing for the permanent opening of skylights to those cases where that is necessary, and where no ill effects will result to the occupants of the building.

Carried.

Section 7 was read.

The President: It might be well with reference to this to re-refer it to the committee with instructions to so amend the wording of this section as to make such increase of the cubic contents of a room, of the available air in a room, by extending the slanting sides and by fixing a certain proportional size of the room, which must be at least eight feet high.

Mr. Clay: There is one thing I would like to mention if this section is referred back to the committee, and it is this: I do not think that too much advantage should be given to structures that are already erected, and there is no reason why a prohibition should not be placed upon any room that is already erected, the floor of which is three feet below the grade, and whether it is erected or not it seems to me that clause should prevent such rooms from being occupied whether they exist or not, because we do not want people to have such a disadvantage. Carried.

Section 8 was read.

Mr. Genung: I wish to speak in reference to one section the health department took exception to, and that is with reference to a dark hall, especially in a room containing a bathroom or water-closet. We feel that that does not provide such lighting, and I doubt if it does.

Mr. Baumann: I would suggest that it would be even difficult on every occasion to make the bathroom as well ventilated as is here specified.

The President: I would suggest this: That if the size of the window for lighting shall be of minimum size it would overcome the objection made by Mr. Genung. After some further discussion, Mr. Boyington moved that the section be referred back to the committee. Carried.

Section 9 was passed without discussion.

Section 10 was passed without discussion.

Section 11 was read.

The President: Is there any objection to this as it stands? There are representatives of the sewer department here, I believe.

Mr. Launders: I would like to ask for information, are you going to construct every sewer so that you can get at it at any time?

The President: There is nothing said in this section about that (reading section), it simply prevents every plumber from avoiding the testing system that is afterward specified.

Mr. Launders: I do not see any objections to any of that, Mr. President. I have always been in favor of testing the sewer.

The President: Then I infer from this that Mr. Launders, as the representative of the Sewer Builders' Association, concurs in Section 11.

Mr. Launders: Yes, sir.

Mr. Baumann: In any house where a sewer is laid it has got to be so that the inspector from the health department can come and see it all the time; it shall not be covered up; that will be stopped now.

Mr. Launders: I would say that that is impossible in a great many places in Chicago, leaving the sewer uncovered. For instance, if there is quicksand and your sewer is probably laid three feet below this and you leave it for ten minutes, it is going to be covered over with water. Where there is a dry ditch you can leave it open, and I am in favor of it in that case.

The President: I will say in reference to this matter that inasmuch as this bill provides in a future section a certain specific test to be made of the sewerage system, and as that test can be made whether sewers are covered with one or ten feet of water, this keeping the sewer open is not a necessity. It would be a convenience to the plumber or the sewer builder, but it is not a necessity so far as the inspection is concerned.

Mr. Pierce: I do not rise to make any objection, but simply to inquire whether the matter was discussed as to the proportionate size of the air inlet to the sewer, or any specified size? A hole of $\frac{1}{2}$ inch or $\frac{1}{4}$ inch would fill the present requirements.

The President: The point is well taken. It was not discussed.

Mr. Wade: Could not an amendment be made to this bill to put man-holes around every trap?

Mr. Launders: I will say for the information of Mr. Wade, that in the bill, a copy of which I think Mr. Genung has, that it calls for a manhole around all traps; also the sewers to be laid in cement three inches, and covered; and all sewerage inside the building.

Mr. Genung: I drafted a section for the association to take the place of this, and which included a manhole; I submitted it to the law department of our city and they said it would not stand a test in court, because that bill was for sanitary purposes and that alone, and inasmuch as the manhole was not a sanitary necessity, it would not stand. Therefore it was cut out.

The President: Suppose it could be shown that it is a sanitary necessity?

Mr. Genung: I think that could not be shown.

The President: If there is no objection to Section 11 we will declare it to be the sense of this meeting. Carried.

Section 12 was read.

Mr. Genung: I do not fully understand that section. Would an Akron clay tile pipe be admitted under that?

The President: We get to that later. This says that if those metal pipes are not, then they shall be, "covered inside and out," etc.

After some discussion Section 12 was adopted without change.

Section 13 was read.

Mr. Genung: It seems to me that rules out the wrought-iron soil pipe. The President: It does.

Mr. Ryan: It meets with the approval of the Plumbers' Association.

Mr. Wade: I maintain that when these gases from sewers are condensed they are dangerous to that pipe; they will eat the pipe; and therefore I think that wrought-iron pipe used for that purpose is sufficient.

Mr. Ryan: Mr. Wade has voiced our sentiment; there is no doubt wrought-iron pipe is desirable.

Mr. Pierce: In Section 13, in addition to ruling out iron pipe, it rules out not only the time-honored lead pipe, but every other pipe that is not

either brass, porcelain or cast-iron. Now, while I am willing to concede that there are objections to lead pipe, wastepipes especially (and which, by the way, might be controlled), and while there may be objections to iron pipes on the ground of corrosion; that there are objections to cast-iron pipes even if coated inside and out, with their numerous lead joints, which from the very nature of the case are likely to be more or less imperfect. It seems to me that this is an extremely radical move.

Mr. Wade maintained that lead pipes would not corrode; that the trouble was that they were not properly placed in position, and that if they were they would last for years, and that iron pipes would bear no comparison with lead pipes.

Mr. Ryan said that lead soil pipes in buildings absolutely did corrode and break, and that while we must use short lateral branches of lead, he hoped that we would have iron pipes for the conducting of waste as much as possible.

Mr. Genung: I would ask that the health department be given an opportunity to inform themselves thoroughly on this matter of sewerage pipes. I must confess I do not understand it. In the first place, this section speaks of a test of fifteen pounds to the square inch. How is that to be determined?

The President: By closing the lower end and filling with water; or by closing all ends or openings and applying the air pump, just as the gas companies do.

After a long discussion as to the best means of applying the test, and the amount of pressure needed, the section was adopted in its original form.

On motion of Mr. Clay the president adjourned the meeting until Saturday, January 15, at 2 o'clock, for the purpose of continuing the discussion of the remaining sections of the bill, adding to the original committee of three Messrs. Clay and Pierce.

President Adler called the adjourned meeting to order at 2.45 P.M. on the following Saturday. On account of the absence of Secretary Stiles, caused by illness, Mr. Patten was elected secretary pro tem., on motion of Mr. Clay, and the reading of minutes of the previous meeting was dispensed with.

The President: The business before the last meeting was the discussion of the proposed law for the regulation of the sanitary construction of buildings. The greater part of it was gone over at that meeting, and it was then referred for further development to the original committee that had the matter in charge, supplemented by Mr. Clay and Mr. Pierce. That committee has acted upon the matter, and is prepared with its report, and if there is no objection, I will have the committee present the amended bill from the beginning, to instruct those members who were not at the last meeting, and enable them to present objections which they may see to the action of the last meeting or to the action of the committee.

Mr. Clay then read the bill as amended, section by section.

Section 1 was read, and the words "all other sanitary arrangements," were inserted.

Section 2 was passed without discussion.

Section 3 was passed without discussion.

Section 4 was passed without discussion.

Section 5 was discussed and passed.

Section 6 was discussed and amended, by Mr. Genung inserting, "except such room or rooms as are controlled by one family or person."

Section 7 was passed without discussion.

Section 8 was discussed and passed.

At this point the president rose and said:

The President: Gentlemen, I must beg to be excused. I have been called to my office in a matter of some importance, and I would ask Mr. Treat to take the chair. I would like to propose to you, before going, a slight interruption in the course of procedure in this act. I will call your attention to the fact, that after we have adopted this bill which is before us, it will be merely this body which has done so, and this body does not make the laws for the State of Illinois. We must appoint a committee in whose charge this bill will be placed, and also the bill which has been proposed by the Western Association of Architects, and delegated to us, making it obligatory upon every architect who is practicing in this state to obtain a license upon certain conditions that are mentioned in the bill. It would be well, perhaps, to put both of these measures in which the Association is interested in the care of the same committee.

Mr. Patten, second vice-president of the Association, then took the chair, when the president continued:

The President: I would move, therefore, that when this bill to Regulate the Sanitary Construction of Buildings is determined upon, that a committee of five be appointed, and I would take the liberty of naming the members: Messrs. Boyington, Burnham, Clay, Cleaveland and Holabird; to be appointed to take charge of both bills in which this Association is interested, and that they do all in their power to secure the passage of these bills.

Mr. Randolph: I second the motion.

Mr. Treat: You hear the motion, gentlemen. Motion carried.

Mr. Randolph: While the business is interrupted I would ask for the reading of the papers I sent up to the president's desk.

Mr. John W. Root: I would ask permission to read the papers offered by Mr. Randolph and referred to by him, and would offer a resolution in relation to it.

Gentlemen,—The law under which the Illinois Soldiers' and Sailors' Home was established fixes the architect's compensation in the following words:

"SECTION 8. The said trustees are directed and required to cause to be prepared suitable plans and specifications by a competent architect, for which not more than one per cent shall be allowed, payable in installments as the work progresses."

When I solicited the appointment of architect I was not aware of this provision, and after the work had been promised to me, I first learned of it from Mr. L. D. Cleveland.

After learning of the organization of the Board of Trustees and also of the above provision of the law I went to visit Gen. Dustin at Sycamore and urge him to get the appointment made at once, if at all, in order that I might inspect kindred institutions with the trustees who were then going on a tour for that purpose. I urged as another reason that I could make the drawings, etc., cheaper and give the work more of my personal attention during mid-winter than later in the season. Gen. Dustin thought favorably of my idea and invited me to go to Quincy with him on the Saturday night

following. I did so, but the trustees started for Leavenworth on Sunday night and did not make the appointment for several weeks after that time.

I never made any formal application for the position, but in order that the trustees might have proper ground for making the appointment I sent several letters of endorsement from leading men which they doubtless placed on file; they finally made the appointment when in session at Quincy. I was in my office when notified by wire to come to Quincy and accept. I had told the trustees that no architect in good standing would accept the work with the compensation provided by law, unless some one who took interest enough in the institution was willing to do the work without pay; nevertheless when I opened the Quincy newspapers on the morning of my arrival I learned that eleven architects had made application and that several of them had been at the meeting and presented sketches. I have not the names of the applicants; they may not have known of the provision in Section 8 of the law as quoted.

When the board of trustees attempted to award the contracts in an improper and unfair manner I promptly resigned my position; a change of their proceedings made it desirable that I should again assume the work, and I did so, although to quote from the newspapers, "relations with the trustees have since been strained."

Notice of dismissal has been handed to me, dated January 1, 1887. I had preferred charges of mismanagement against the trustees sometime before that date. A torrent of abuse has been let loose at me, and is pretty good evidence that an investigation is feared, and that all will be done that is possible to break down the evidence.

I have thought so much explanation as this was due to you as a society; when the time comes that I can properly do so, I shall more fully explain matters in the technical papers and magazines; you are earnestly requested to give the matter close attention and to throw the weight of your influence on whichever side you find to be right. I have no fear, and ask no favor. If I am in the right every architect's interest is to sustain me; if in the wrong every architect's interest will be subserved by disposing of me at once.

S. M. RANDOLPH, Architect.

Mr. Root: In view of this communication I would like to offer the following resolution:

Resolved, That in view of the annexed statement by a member of this association, Mr. Randolph, the Illinois Association of Architects deem that a full investigation by the senate and representatives of the State of Illinois, of all the facts in the case is imperatively demanded.

It is the sense of this association that the case is one having most important significance, not only in its influence upon the status of the architectural profession, but upon all architectural work undertaken by the state or by corporations or associations within its limits.

Resolved, That this association would consider that any failure to fully investigate by the senate and legislature all the facts of this case would be a public calamity, and that we hereby request the Hon. T. C. MacMillan to present the subject at his earliest convenience to the house of representatives for their proper consideration.

The Chair: Gentlemen you hear the communication and the resolution as offered by Mr. Root. Any remarks to make on the subject?

A motion was made and seconded that the resolution be passed. But the motion was deferred, and Mr. Clay said:

Mr. Clay: Before saying too much on the subject I would like to ask Mr. Randolph one question, and that is, whether when he did actually commence work, commence his drawings for this work, he knew that the compensation he was to receive was to be but one per cent?

Mr. Randolph: I did, sir; the resolution says so.

Mr. Clay: Then I move that this motion be laid on the table.

Mr. Root: It seems to me that any action taken here would be of slight consequence, and whatever might really be the merits of this case, our action would not so fully determine the question as a public action by the legislature of the state. It seems to me we are more interested in having this question gone into by persons in authority than to dispose of so important a question as this by ourselves; and it is for that reason that I have made the resolution. I consider the matter of sufficient importance to be gone into by the state itself.

Mr. Randolph: I ask an investigation, whether I had the right to take this work at one per cent.

Mr. Boyington: I would like to ask Mr. Randolph if it is a part of the Legislative Assembly's business to investigate whether you had a right to take that at that price? If I infer aright, from your remarks, you want that part considered by the legislature.

Mr. Randolph: No, sir; I have not asked that.

Mr. Boyington: It occurs to me that to pass a resolution asking the legislature to investigate this without knowing anything about what the charges are is a little premature.

Mr. Randolph: I would like to make a further explanation. I can send for a copy of the charges that I have made of mismanagement, and for conducting the work so that the state will be defrauded and the institution become a public scandal. Further than that it is not my intention to make public the charges, for the reason that it may cause some delay before the investigation is made, and the parties in interest may cover up and change things, and be able to conceal the fraud which they are perpetrating upon the state and upon the institution.

Mr. Boyington: In that case it would seem to me that the resolution should have a little more explanation. Mr. Randolph being a member of this association, and having been accused as he has of these things, that we demand, in honor to our institution, to be investigated. I think the resolution is not pointed enough to demand of the legislature an investigation, unless we put it in some way as a reflection on one of our members.

Mr. Randolph: I have striven to make this as impersonal as possible. I have been for thirty years in as high standing in the profession as my ability permitted, and am today. It may be possible that the parties' interests may be able to crush me if I fight this single-handed. If so, then I will go down with my hands at my side; nothing will compel me to admit anything is wrong on my part. I do not urge this, but think the State Association of Architects should take it up as Mr. Root has suggested. The first clause in that bill is enough to demand an investigation by any architect.

Mr. Root: I think the remarks made by Mr. Randolph are of very great significance to us; that an authorized board appointed by the state should thus invite competition from architects upon a basis such as that, seems to me of itself of very great significance, and it seems to me that no facts in this case are impertinent to us, and that an investigation should cover the entire facts in the case.

Mr. Pierce: I rise to a point of order. I would like to know whether we are competent to consider this matter at this, an adjourned meeting, that was appointed for a specific purpose.

Mr. Treat: I doubt whether we have any right to discuss matters outside of the sanitary bill.

Mr. Patten: I suppose the constitution would determine that.

The Chair: It is just as the body decides, I suppose.

After a long discussion as to the admissibility of the question at that meeting, the chair, on motion of Mr. Root, ruled the discussion out of order, and his decision was sustained by the body.

Mr. Boyington: Now that it has passed, it seems to me there should be some means of introducing it again.

Mr. Treat: Part of the resolution reads that Mr. McMillan be requested to attend to this matter. I would suggest that a committee be appointed to suggest this matter to Mr. McMillan.

Mr. Clay: I move that the Executive Committee take this matter in charge. The motion was seconded by Mr. Boyington and carried.

Section 8 was again referred to and discussion invited. After considerable debate the section was re-referred, on motion of Mr. Patten, to the committee, with power to act.

Section 9 was discussed, and at the suggestion of Mr. Genung was amended by inserting in the second line after the word "lot" "or building thereon," and passed.

Section 10, on suggestion of Mr. Genung, was amended by striking out the fourth line after the words "or of the said," and passed.

Section 11 was discussed.

Mr. Launders, of the Committee of Master Sewer Builders' Association: I think you will find in Section 5 of our resolutions that that was supposed to include an imbedding in cement of three inches, and also covered.

Mr. Genung: That was the draft of the original bill of the health department, to have it "centrally imbedded in concrete half a foot larger than the outside diameter of said drain," but the committee ruled me out. Still, I think that is the way it ought to be.

Mr. Treat: Is there anyone who will make that amendment to the section?

Mr. Pierce: In order to get the sense of the meeting I will make that motion. Motion seconded.

Mr. Boyington: I do not object to the clause any further than that people of small means do not wish to be overtaxed. For instance, where a small cottage is put up and you want to drain it, to be obliged to cut through that amount of cement.

Mr. Clay: I think Mr. Boyington's objections ought to be the other way, because, you know, rich people can better afford to be sick than poor people.

Mr. Launders: I may say for the information of Mr. Boyington that the cost is merely nominal.

Mr. Boyington: I do not find it so.

The Chair: Can you give us an idea, Mr. Launders, how much per foot it will cost?

Mr. Launders: Five to seven cents per foot.

Mr. Boyington: If that should pass I should want it subject to the sanitary commissioner's inspection, and to know the quantity of cement called for was there.

Mr. Pierce's motion to amend the section as stated above was then put and carried.

Section 12 was passed with slight discussion.

Section 13 was passed without discussion.

Section 14 was passed without discussion. At this point the discussion of the bill at the previous meeting closed.

Section 15 was read.

Mr. Ryan: I am directed by the Master Plumbers' Association to suggest an amendment: That no water-closets shall be supplied by a direct pressure, but that all closets shall be supplied by a tank or tanks. This would necessitate the striking out that part where it refers to the basements, and make that read that "all water-closets shall be supplied by a direct current, but all be supplied by tank or tanks."

The Chair: How are you going to manage a closet under a sidewalk, or some place where it would freeze six months in the year?

Mr. Ryan: That could easily be provided for, if there is a space under the stairway that we could run a tank inside the building.

After considerable further discussion Mr. Pierce said:

Mr. Pierce: It seems to me that we have gone pretty far, and we will get a great deal if we can have it passed, that all water-closets used in any story of such building or buildings above the basement story, shall be so constructed as to be connected with a flush by means of a tank or tanks. And I move that this section be passed as it reads.

Mr. Murray: As a member of the committee of the Master Plumbers' Association I desire to enter a protest against any such passage.

After a long discussion the section was adopted as read.

Section 16 was passed without discussion.

Section 17 was read and Mr. Genung suggested that something should be specified as to the time and the manner of preparing the work for the test of the department.

Mr. Clay moved that this section be re-referred to the committee to make the wording as suggested by Mr. Genung. Carried.

Section 18 was discussed and passed.

Section 19 was read.

Mr. Ryan: We would recommend that drain cocks, such as check-cocks, waste-cocks, sediment-cocks and pet-cocks, for these supply pipes and overflow pipes from tanks should not be connected with the sewer. This means that all cocks in the building shall not be connected with the sewer.

Mr. Clay moved that this section be re-referred to the committee with power to act, with the suggestions of Mr. Ryan. Carried.

Section 20 was passed without discussion.

Section 21 discussed and passed.

Section 22, on motion of Mr. Clay, was referred to the committee, with power to act.

Section 23 was read.

Mr. Pierce: I would say that there has been an omission in this new draft that would require all soil and wastepipes to be carried above the room. It has been omitted in some way; it is not in the draft of the new law under discussion, and I move that the provision apply to the whole law now in force.

Mr. Clay: I think if we could get rid of Section 23 then it would be proper to put this section in, because it undoubtedly should go into the bill.

Mr. Ryan: I would suggest that all soil or wastepipes should be extended at least one foot above the room.

Mr. Genung: If I may be permitted I will read the section just as it was presented to the association. (Reads section.)

Mr. Clay moved that this section be incorporated in the bill as Section 24. Carried.

Section 25 was read.

Mr. Ryan: Our association thinks that this would be excessive, and we recommend \$10 for the first offense, and not less than \$50 for the second offense. There is no doubt that a nominal fine will compel the plumbers and others engaged to respect the law.

Mr. Genung: If we fix a nominal fine, such as \$10, it would act as an incentive to the man who wanted to do some poor work, especially if it was work of any considerable dimensions. The object is to take it out of our petty courts in which we are obliged to go with any grievance under \$200.

Mr. Ryan: I am instructed by the Plumbers' Association to request that 48 hours instead of 24 be the time specified in this section.

On motion of Mr. Clay, Mr. Ryan's suggestion was incorporated in the section.

The meeting then adjourned, after passing a vote of thanks to Messrs. Genung, Wade, Murray, Boyd, Ryan, Launders, and others, for their valuable assistance in the discussion of the bill.

AN ACT TO PROVIDE FOR THE REGULATION AND INSPECTION OF THE SANITARY CONSTRUCTION AND ALTERATIONS OR MODIFICATIONS OF BUILDINGS IN CITIES AND VILLAGES, AND TO SECURE PROPER VENTILATION, PLUMBING AND SEWERAGE SYSTEMS FOR HABITABLE BUILDINGS, AND PROVIDING PENALTIES AND FOR THE ISSUING OF INJUNCTIONS IN CERTAIN CASES.

Be it enacted by the people of the State of Illinois represented in the General Assembly:

SECTION 1. It shall be the duty of the owner or other duly authorized person interested in the contemplated erection or alteration of any building, within the corporate limits of any city or village in this state, in which there is established an officer or department of health, to obtain from such officer or department a blank, entitled "Description of Building," and fill the same in a manner fully describing said contemplated building, with its plumbing and sewerage fixtures, and to submit such description to the said officer or department for examination and approval; which approval shall be granted only upon condition that assurance direct and implied is by said owner or said other person given to said officer or department of health that the sanitary conditions of the building will be, when completed, in accordance with this act. And in case the said building, intended to be erected (or extensively modified), be for purposes of habitation, then and in such case a full set of drawings, showing locality and arrangement of plumbing, sewerage and all other sanitary arrangements to be provided in the said intended building, shall by said owner or other authorized person, be submitted to said officer or department for action as above set forth, before any portion or part of the said building shall be commenced or modified.

SEC. 2. No building permit shall be granted or issued by any officer or building department in such city or village before the approval provided for in Section 1 of this act is obtained.

SEC. 3. The person executing the plumbing work, or causing its execution in any such building other than mere repairs, shall, before in any way concealing or allowing such work to be concealed, properly prepare his work for the test hereinafter required, and notify in writing the said officer or department of health to the effect and substance that the said plumbing work is then and there in a state of completion for inspection, and shall allow such officer or department a full day's time after said notice (not including Sunday or holidays) for the proper inspection of and officially passing upon said work. And in case the said department shall be unable to inspect and officially pass upon such work, it shall through its proper officer grant to the person making application for inspection as above, a notification to that effect, but such notification shall in no way be construed into an acceptance of the work aforesaid, but must contain the privilege to proceed so that the progress of the whole work may not be retarded.

SEC. 4. Every habitable building hereafter erected in any such (said) city or village, shall have its ground floor covered with a firm stratum of cement and gravel, or asphaltum concrete, not less than three inches in thickness. Where a space exists between the asphaltum concrete and the bottom of the ground floor joists, the same must be ventilated by dividing flues or other suitable means.

SEC. 5. A habitable room in any building hereafter erected or remodeled, shall have one or more windows of dimensions not less than one-tenth of the area of floor space of such room, and an open space or light shaft shall be reserved or established for all such windows, which shall have an area that for a building of three stories or less shall equal not less than one-sixth part of the floor area of rooms and public and general halls thereby to be aired and lighted in any one story. Such minimum size of open space or light shaft shall receive or have an increase of five per cent for each and every additional story of the building.

SEC. 6. Every skylight hereafter constructed in any such building shall be permanently ventilated through openings or air ducts in or near, and extending at least one foot above its top, and the area of such ventilating openings shall not be less than one twenty-fifth part of the area of skylight opening. When, however, such skylight is over a room controlled by one family or person, the openings may have a valve or other provision whereby the ventilation may be controlled at pleasure.

SEC. 7. A habitable room in any building hereafter erected in any such city or village shall be not less than eight feet in height between joists of floor and ceiling, except in case of an attic habitable room which shall be at least eight feet, as aforesaid, for not less than one-half of its area. And the floor of a habitable room in any building shall be not more than three feet below the established grade at the curb line of the lot upon which said building is, or is to be erected.

SEC. 8. Every water-closet room hereafter constructed in any such city or village shall have permanent automatic ventilation through an independent air shaft not less than four by twelve inches in its cross section, commencing not more than twelve inches above the floor. Such shaft shall extend not less than two feet beyond the surface of roof and be not below any peak, observatory or other construction upon the roof thereof that may be located within twelve feet of such shaft; and such closet or room shall be lighted by a window conforming in size with those provided for habitable rooms, but in no case with an area less than five superficial feet, and such window shall be either in an exterior wall of the building or in a light shaft constructed for the purpose, or in a general light shaft, which said window shall (in last-mentioned case) be stationary, and which said "light shaft constructed for the purpose" aforesaid, shall in no case have an area of less than eight superficial feet. In hotels, however, a water-closet connected with and for the exclusive use of any apartment may receive its light from said apartment through a stationary sash.

SEC. 9. No privy vault of any kind shall hereafter be constructed or allowed by the owner of any lot of land or building thereon, situated in any such city or village, to remain in any building, or upon any lot of land adjacent to a street or alley on which there is a public sewer established in front of or adjacent to said building or lot.

SEC. 10. No alterations, additions or modifications which will change or alter any or all of the sanitary conditions or arrangements in any building erected or located in any such (said) city or village, shall be made, except upon prior express approval, in writing, of the said officer of the said department of health. Nor shall any additional structure be erected upon any lot of land situated within such city or village upon which there is already a building erected without such approval, and a special permit in writing from said officer or department.

SEC. 11. All sewerage drains hereafter laid in such city or village, shall be laid with a uniform decline of not less than one-tenth of an inch to the foot, and there shall be constructed a trap and adjacent air inlet in connection with the drainage system of each building. Said air inlet shall be located outside of said building and shall have an

effective air inlet space of not less than twelve square inches. The entire sewerage systems in any such buildings hereafter erected where not of metal shall be of hard-burned glazed tile pipe which shall be centrally imbedded in a solid cement grouting six inches larger than the outside diameter of such drain, and shall be so constructed as to allow ready and complete inspection at the time of its completion, and all drains laid in any such building, shall be laid with the joints thereof made capable of resisting the water pressure resultant from filling the said pipes with water to their in-take ends.

SEC. 12. Metal sewage drains and soil pipes, if not cnamelled or made of non-corrosive material, shall be covered inside and outside with a coat of asphaltum, and all their joints and connections shall be made absolutely airtight by means of molten lead or other metallic substance, and shall be capable of sustaining an internal pressure of not less than fifteen pounds to the square inch of surface.

SEC. 13. Every soil and every waste pipe hereafter constructed and placed as such in any such city or village shall be of cast-iron, or brass or porcelain (except subordinate, lateral and connecting pipes not exceeding eight feet in length, which may be of lead), and when such pipe is put up for use, it and the joints thereof shall be capable of sustaining an internal pressure of not less than fifteen pounds to the square inch of surface.

SEC. 14. The in-take ends of all drains and their branches in any building shall be curved to correspond with an inner radius of not less than twelve inches, so as to properly meet the horizontal drain and the perpendicular waste and soil pipe, and form an airtight connection with them, and if a handhole is provided, it shall be easily accessible, and have a metallic cap applied in the same manner as required for connecting metal pipes with house drains.

SEC. 15. The use or construction of any kind of pan water-closet in any building in such city or village is hereby prohibited. All water-closets used in any story of such building or buildings above the basement story shall be constructed so as to be connected with and flushed by means of a tank or tanks.

SEC. 16. No chimney flue or water leader-pipe shall be used for conveyance of exhaust steam or for ventilating soil or waste pipe.

SEC. 17. The work upon sewers and plumbing, before being put in use, shall be prepared and properly closed up by the owner so as to make the testing of the same, to the extent heretofore provided in Sections 11, 12 and 13 practicable for the officer of the health department, who shall be notified in the manner provided under Section 3, and who shall have the same time as therein also provided to execute the test, and it shall be the duty of the said officer of the department of health to officially pass upon the work aforesaid.

SEC. 18. Every water-closet, sink and other plumbing fixture placed and provided in and for the use of any building hereafter erected in such (said) city or village, shall be connected with the sewer and provided with efficient trap, sufficient to prevent at all times the passage of air through the pipes from the sewer to the said fixtures, and no trap shall be placed and constructed at the foot of any water, soil or ventilating pipe, and said plumbing or plumbing fixtures and pipes shall be so constructed as to permit at all times, without obstruction, the passage of a current of air from the air inlet mentioned in Section 11 of this act, through all pipes last mentioned.

SEC. 19. Overflow guards or safes to any fixture or fixtures, and all refrigerators shall have independent wastepipes, and shall not be connected with the drainage system, nor shall any check, waste, sediment or pet cock operating upon supply pipes, nor any overflow pipe from any tank be connected with the sewer.

SEC. 20. No grease-receiving basins or cesspools of any kind shall be constructed and placed for use within the walls of any habitable building hereafter erected within any such (said) city or village, nor shall any grease-receiving basins or cesspools heretofore constructed in any habitable building in such (said) city or village, be allowed to remain thereon or therein longer than thirty days after this act shall go into effect. In all cases when the area of a building erected or to be erected in such (said) city or village, shall occupy the whole of its lot, such grease-receiving basins shall be constructed under the sidewalk or underneath the surface of the alley, if any such there be adjoining the premises upon which said building is situated.

SEC. 21. No lead pipe shall in any building hereafter erected in any such (said) city or village, be connected with an iron pipe except by means of a metallic ferrule.

SEC. 22. No duct or flue for admitting air to an apparatus intended for warming, shall be concealed below the concrete under the lowest floor of any building, except that the same be laid in dry sand or soil, and be made of impervious and imperishable material, hermetically sealed at the joints.

SEC. 23. Every soilpipe and wastepipe shall extend through and at least two feet above the highest roof of the building of which it is a part, open and undiminished in size, and no such extended pipe shall have its open top end nearer than ten feet to the window or door of a habitable room; and such pipe shall continue in an upward direction, and no horizontal or nearly horizontal portions of such pipes will be permitted which aggregate portions shall exceed one-half their vertical measurement, and all divergence from a straight line shall be made with curved pipes, and connections with horizontal pipes shall be made with Y-branches of proper size.

SEC. 24. Said officer, or any duly authorized officer of the said department shall, so far as may be necessary for the performance of his or their said respective duties therein, have the right to enter at any and all reasonable hours in the daytime any building or premises in such (said) city or village.

SEC. 25. Any person violating any of the provisions of this act, or any said owner or officer who shall neglect or refuse to comply with any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof in any court of justice, shall be fined not less than two hundred and fifty dollars, nor more than five hundred dollars; recovery to be had in the name of and for the use of the city in which the offense shall have been committed or incurred.

SEC. 26. Any person convicted and fined as mentioned in Section 24 of this act, who shall for the space of forty-eight hours next ensuing after being so found guilty by said court, fail to comply with the requirements of this act, or any provision or requirement thereof, shall be deemed guilty of a misdemeanor, and upon conviction thereof before any court of justice, shall be fined in a sum of money not exceeding five hundred dollars.

SEC. 27. The circuit courts of this state and the superior court of Cook county are hereby authorized and required to issue, upon due application of any officer or department mentioned in Section 1 of this act, or of his or its duly appointed agents, in the name of said officer or department, an injunction restraining or preventing the use and occupation of any such (said) building or structure which is or shall hereafter be erected, altered or maintained, or the sewerage system of which shall be constructed, altered or maintained (or any portion thereof) used in violation of this act, or any of the provisions thereof.

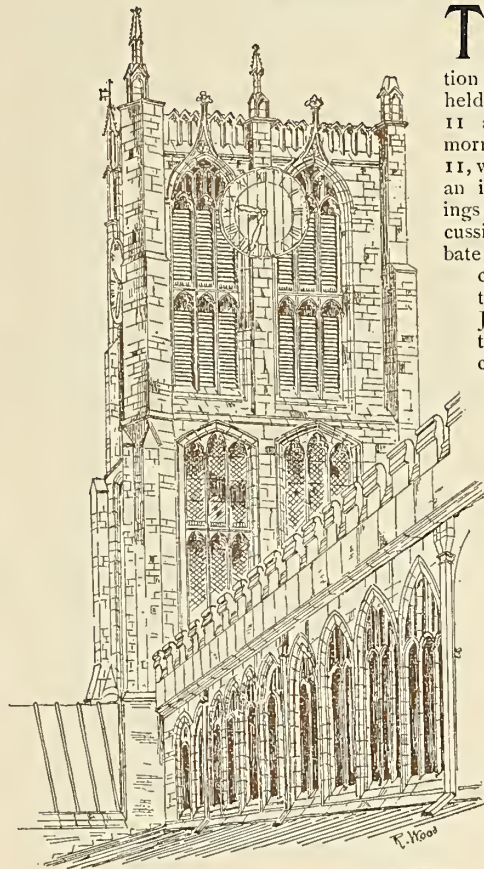
SEC. 28. Any and all laws of this state in conflict with this act are hereby repealed.

WM. W. CLAY, *Chairman*,
W. W. BOYINGTON,
D. H. BURNHAM,
WM. HOLABIRD,
L. D. CLEVELAND,

Committee Illinois State Association of Architects.

The sales of *The Century Magazine* increased over 30,000 copies in the six weeks following the beginning the Life of Lincoln. A veteran New York publisher predicts that the permanent edition of the magazine will go beyond 300,000 before the completion of the Lincoln history. The January instalment is of most surpassing interest, occupying thirty pages of the magazine, treats of Mr. Lincoln's settlement in Springfield; his practice of law in that city; the Harrison campaign; Lincoln's marriage; his friendship with the Speeds of Kentucky; the Shields duel; and the campaign of 1844. The illustrations are numerous, including portraits of Joshua Speed and wife, of Mrs. Lucy G. Speed, Milton Hay, President Harrison, General Shields, William H. Herndon (the law partner of Mr. Lincoln), and Mr. Lincoln himself, from the photograph presented by him to Mrs. Lucy G. Speed, in 1861. Pictures are given of the house where Lincoln was married, also the house where he lived after his marriage, etc. The January New Year edition is exceptionally fine.

Convention of the Missouri State Association of Architects.



Holy Trinity Church: Hull: Evg.—
—Tower from Roof of N. Aisle—

THE third annual convention of the Missouri State Association of Architects was held in St. Louis, January 11 and 12, 1887. The morning session, January 11, was devoted chiefly to an interchange of greetings and to informal discussion. After some debate as to what should constitute a quorum, the president, Mr. James McGrath, architect, decided that, according to the Constitution, only those members who were not in arrears to the treasurer could be considered as being in good standing, and that a third of these would be sufficient for a quorum.

The afternoon session opened with an attendance of twenty members, as follows: T. B. Annan, J. Beattie, L. C. Bulkley, T. J. Furlong, C. C. Hellmers, C. E. Illsley, J. B. Legg, James McGrath, J. H. McNamara, A. Monschein, J. D. de Pombiray, Frank A. Renick,

C. K. Ramsey, A. F. Rosenheim, F. Weston, George I. Barnett, of St. Louis; James Bannon, Geo. Carman, S. E. Chamberlain, M. A. Diaz, F. B. Hamilton, of Kansas City, Mo.

The convention was called to order by the president, the Hon. James McGrath, who spoke as follows:

Gentlemen of the Convention.—I see in the announcement for this meeting, which the secretary has been kind enough to get up, that, in his usual vein of humor, he makes reference to the fact of the president's address. I confess that I am at a loss to understand what he means by it; and he has put it in such a way that I don't know whether he means the out-going or the incoming president. (Laughter.) For my own part I will say, gentlemen, that I have no formal address prepared, I have been so short a time in the city of St. Louis that I have had no opportunity of preparing it. What has been done during the past year by this association, has been done, I believe, by the Executive Committee. The business has devolved upon them. I wish to say, however, that we are pleased to meet you all again, and I desire heartily to enter with you into the discussion of such questions belonging to our profession as will aid in anyway toward the development of it, and which may lead to its elevation.

I would like to suggest a few things that you, gentlemen, might, perhaps, consider with profit, not only as far as it applies to the city of St. Louis, but to the profession throughout the entire state.

When we look over the statistics and see the enormous amount of money that is yearly wasted by fire, I do not think there is any feature connected with this profession that calls for more earnest work on the part of our members than that which would tend to make fires in buildings as remote as possible. You know very well that our profession, like all others—like the merchant or the manufacturer—is no more willing to expend money in buildings without being able to see the return which the expenditure will make, than they are to put money into any other enterprise. Whatever serves to cheapen a building and make it better serve the purposes for which it was intended, and which provides for its security after it is constructed, may well occupy your attention. Whatever tends to make a building more secure, and to make the probabilities of fire more remote, is one of those topics which, I am sure you will agree with me, should meet with our careful consideration. The trouble which has recently occurred in this city, by the falling of buildings, is another matter I wish to call your attention to. It occurred to me, in a conversation with the secretary of this convention a few days ago, to suggest this idea, that we look over the law of our state covering the inspection of buildings; and I think it might be well to have you, gentlemen, well consider it, to the end that there may be prepared an amendment to that law, authorizing the commissioner of public buildings to organize a committee of architects, comprising three, four, or five members, as may be determined; and when a building is about to be occupied for a purpose different from what it was originally intended for, that they should thoroughly examine its strength, and beyond a question of doubt, ascertain what its real condition is, and when this is ascertained placard it in some way so that the parties entering the building may be made aware of just what it is capable of carrying. The expense of such an examination might be borne by the owner of the building. I think that the owner, or the man who has the building for hire, ought to be required to furnish the party entering it for any purpose, with an exact knowledge of what it is capable of sustaining. Some one should be responsible, whether it is the owner or the tenant, for the loss of life and property by a building that falls; and when occurrences of this kind happen, the responsibility can thus be fixed. If the occupant of a building loads it beyond what he is told it is capable of carrying then there would be no question about his responsibility; and I think the owner should otherwise be responsible for the loss sustained by the falling of the building.

There is another point which has often been discussed, and I believe our laws fully provide for it. I have reference to gentlemen entering into competition for the erection of buildings, and the furnishing of designs, etc. I believe the first thing an architect should do, who furnishes a competitive design, should be to insist that there should be a board appointed competent to pass upon the work. It often happens in such cases, that an architect may work for months on a design, and someone who has never put pencil to paper may be selected to gather up the ideas presented, and in this way the architect is deprived of his reward.

Our laws provide for all that I think, but they don't seem to be enforced. So far as the compensation is concerned, that is always provided for; but here, as well as elsewhere, I have heard of a good deal of trouble on that score. We are not simply alone in the West in regard to that feature. But everywhere, with the exception of a few places perhaps, it appears that architects thus reduce the value of their own work, by carry-

The rule of the ancients was to make their foundations in depth one-sixth that of the height of the building. But where heavy loads are to be carried, it is not great depth, but great width of footings, that is needed. The greater the width, the greater the surface covered to resist the pressure, on the same principle as that of the use of the snowshoe, with which you can safely glide over the frozen snows, they presenting a superficies to the surface of the snow of sufficient area to sustain your weight, when with the ordinary shoe you break through and sink at every step.

Nowhere in the country is there as fine a stone for cutstone work as that obtained from the quarries in our western suburbs, known as the "Papin Avenue Quarries." It is a calcareous limestone, of a hard, compact texture, of even color, and capable of receiving a fine polish. No other stone has stood our climate and held its color as well. It is undeniably the best and handsomest stone in our market.

The climate of St. Louis, and, indeed, of all large, smoky cities is a severe test, for the many impurities of the atmosphere, having their solvent parts washed out by the heavy rains, and driven on to the stone, greatly facilitates the decomposition of poor stone.

A very fine limestone was introduced here some thirty years ago, and is used in the columns and trimmings of the Mercantile Library building, now about to be torn down. It is a hard crystalline, but has not held its color. It came from Nauvoo, Illinois, and is from the same quarry of which the famous Mormon temple is built.

Another good limestone was brought here about the same time as the Nauvoo stone for the columns of the court house. It is an oolite, strong and flexible under the hammer, and wears well. It came from the hills adjacent to Ste. Genevieve, in this state. I believe it is the only specimen of oolite in the city.

The stratified limestone quarries of the prairies surrounding our city, averaging a depth of 250 feet, produce a good building rock for rubble and quarry-faced range work. All our finest churches are now being built of this stone, and for cutstone ashlar when laid on its natural bed, as it is less liable to disintegration when in that position. All the ashlar work of the court house is of this stone, and bears well the original tool marks.

The above stones are fair specimens of the best calcareous, magnesian, crystalline and oolitic limestones used in our city. In speaking of calcareous stones, I, of course, leave out the marbles, as they are used extensively for interior decorations.

The worst specimens of limestone brought here are all of the magnesian composition, having in them a large proportion of clay. Of such are the stones used in the old cathedral, the old custom house, the First Presbyterian Church, Fourteenth and Lucas place; the Episcopal Church, Thirteenth and Locust street, and the fronts of a few dwellings. They are all badly decomposed, the oldest not yet fifty years in use. Those of the cathedral and custom house are Missouri stones; the others are from Illinois.

Another magnesian limestone that once filled our markets, but now seldom used, except to match itself in reconstructed buildings, is the Joliet stone. Like the human species, it sheds itself every seven years, always presenting a new surface to the elements.

Of the sandstone coming into the market, the best specimens are those from the Warrensburg quarries. It is a white, close-grained stone, easily cut when first quarried, and hardens by exposure. It is much sought after for carved work.

The vilest specimen of a stone ever introduced here is a sandstone from St. Charles county, in this state, and is used in the columns of the church on Locust and Tenth streets, that now after a few years' exposure, looks like columns of frozen clay.

Presumably with the best intentions, the old churches have been awarded the greatest share of poor stones.

No sandstone, however, from its composition, will stand exposure equal to limestone. Although the crystals of the sandstone are themselves practically indestructible, yet the cementing matter, or lamina, lying in planes parallel to the bed of the stone, when exposed to the action of the atmosphere, becomes loosened, and disintegration is hastened.

Almost all stone will carry its load with safety underground, that being its native home. And some stone will do so in an elevated situation; that when coming in contact with the ground, are so affected by the first in the clay that they soon decompose.

The building stone at our doors would perform better service if greater care was exercised in its selection. For in the same quarries and underlying ledges a sound and durable limestone will be found, ledges that should be carefully set aside and sold to the city for macadam.

A good illustration of an excellent and a bad quality of stone from the same quarry can be seen in the Polytechnic and the old custom house building in this city. The stone in the former building is yet sound, clean and sharp in all its angles and surfaces, while the stone in the custom house is rutted and scooped out wherever there is a projection. The stone is equally exposed and in similar situations in both buildings. It is known as the "Knipper stone," and came from the quarries at Barrett's, on the Missouri Pacific railroad.

But the correlatives of good stone, to insure a good job, are good workmen and good mortar. Bad workmanship is chargeable to the workman, as bad judgment in the selection of stone is chargeable to the architect. It is poor consolation to the architect or his client to raise a magnificent structure of perishable stone.

This prompts me to utter an illustration. With what a sense of safety you can walk under our plain and massive Doric court house, compared with the unsteadiness of nerve and the sense of impending danger you experience while standing under the sculpture and the enriched entablatures of the court house in Chicago. And with what pride you stand in either city and look across the street at our government buildings, imperishable granite from base to top of cornice.

On motion of Mr. Illsley, a vote of thanks was unanimously adopted for Mr. McNamara's valuable paper.

Mr. Illsley: I would like to say a word about the Papin avenue stone. I know of two places where that stone was used where it went all to pieces in two years.

Mr. McNamara: The stone might have been badly set.

Mr. Illsley: In one case it was set in steps molded, and in the other case it was a coping and corner posts to an inclosing wall. It has gone to pieces throughout. I have inquired, and learned that others have had similar experience with it. I saw, two weeks ago, some very fine-looking specimens of brownstone; I do not recollect where from, but I think someone told me that it was Iowa stone; it was on a flat car on the Missouri Pacific railway track, and two of the largest specimens were cracked right through, horizontally. I do not suppose they would be put on the car cracked. They were quite worthless.

Mr. McNamara: I have seen very fine stone cracked clear through by handling, by letting one end down suddenly before the body of the stone came down.

The President: It not infrequently happens that we get bad stone and good stone out of the same quarry.

On motion of Mr. Hellmers, the convention adjourned to ten o'clock Wednesday morning.

SECOND DAY—MORNING SESSION.

After some delay and informal discussion, the convention was called to order by President McGrath. The Executive Committee announced the addition of two new members of the association: Messrs. P. P. Furber and George K. Thompson, both of St. Louis.

After some interchange of views, the Committee on the State License Law and the Lien Laws, was intrusted with the further care of legislation to protect architects from municipal taxation, and was styled the Committee on Legislation.

Mr. Ramsey then announced that the Entertainment Committee had arranged a lunch for the convention, at the Mercantile Club, at the close of the morning session.

The president requested all members who presented essays to deliver their manuscript to the secretary for incorporation with the proceedings.

Mr. George Carman, of Kansas City, now read a paper on "A Uniform System of Measurements":

Mr. President and Gentlemen,—I presume all of you have been sufficiently annoyed, and at times perplexed, by our present befuddled system of measurements to at once agree with me that "a uniform system of measurement" is a thing devoutly to be wished for, therefore, I need not dwell on that point, but in order that we may get a more correct idea of the proper system to have I will devote a few words to the present system.

The present system is, as I look at it, a sort of a matrimonial alliance between state law and local customs, the law being originally the outgrowth of the very customs it has since formed this alliance with.

This law is, I think, based upon entirely wrong principles, for the following reasons:

First. The application of this law, in practical use, is purely a mathematical problem, and therefore it should conform to and harmonize with the commonly accepted and long-established rules and usages of mathematics, and that is just what this law does not do. For instance, the rules of mathematics say that a wall eighteen inches thick has more in it than one twelve inches thick, but this law says it has not, to-wit: "All walls under eighteen inches thick shall be measured as eighteen-inch walls."

The rules of mathematics say that a pilaster projecting eighteen inches has, other dimensions being alike, more in it than one projecting only twelve inches, but this law says it has less, to-wit: "Pilasters projecting twelve inches and under, shall be measured by taking the face and adding the two returns, etc." Pilasters projecting more than twelve inches shall be measured by taking the face and add one return, etc." That amounts to this, that if a pilaster with twelve-inch projection should be extended to an eighteen-inch projection, which would in reality increase its size just half, it will by this law have instead of half more, one-sixth less. The rules of mathematics say that a pier $3\frac{1}{2}$ feet square has $12\frac{1}{2}$ cubic feet in it for every one foot in height, but this law says it has $24\frac{1}{2}$ cubic feet. These same rules also say that a pier 4 feet square has 16 cubic feet, while the law says it has 24 cubic feet, being one-half cubic foot less than a pier $3\frac{1}{2}$ feet square has, and so I might go on citing numerous other cases where this law flatly contradicts and gives the lie to the most ordinary and simple mathematical rules.

Second. This law should be so framed as to cover all possible points that may arise, and do it in such a way that there could not be two opinions as to its meaning and intentions. That the present law is not so framed the records of our courts furnish ample proofs. When experts have been called in to swear to the measurement of masonry they have almost invariably differed, and on complicated jobs they have often differed widely. Now, this should not be so.

There is just so much in a wall, and there should be no difficulty to get at the correct amount, and if our system of measurements was based on simple common-sense principles, and actual facts, there would be no difficulty in getting at it, and everybody familiar with the first principles of arithmetic could figure it up with like results.

Were you to ask two or more persons of even the most limited education, but who had never heard of the laws and customs affecting the question, how many cubic feet there are in a certain wall, they would readily figure it up and agree on a like amount, even though they had never seen a wall before. But if you were to ask the same question of two or more of the most learned architects or engineers in the state, and who had been brought up from babyhood right on top of a wall, they would hem and haw, and read the rules and regulations, and exceptions and by-laws, and constitution, and consult their learned friends, and all the old citizens, and then, looking wise, but feeling very foolish, would finally come to entirely different results, and why? Simply because they had heard of the law and customs bearing on the question.

Third. This law is also troubled with "exceptions," which should not be the case, for just so sure as you permit exceptions in it just so sure will cases arise which neither the law nor the exceptions will cover, and then customs commence to govern, and customs being as numerous as localities, would strike a death blow to a uniform system of measurements.

Fourth. This law is also unjust, in that it is, to a certain extent, a legal trap in which innocent people are often caught. No one would naturally look for, or expect to come in contact with, a law declaring two and two to be one, yet this law has in it features of this kind, and the result is owners are sometimes forced to pay considerably more than any natural or reasonable interpretation of the contract would call for.

Now, then, to sum up the present state of affairs, we have a state law composed principally of injustice, exceptions, and ridiculous and unnatural contradictions of actual facts, the result of which is customs have been forced to its assistance, and this combination, or, as I stated it before, this matrimonial alliance between the state law and customs, constitutes our present system of measurements, and trouble, misunderstandings, disputes and lawsuits are the disagreeable offspring of this unholy union. Now then, this disagreeable offspring is the objectionable feature of the present system, and so it is they want to get rid of, and the first step to take is to divorce the old couple; they must be separated.

This offspring is short lived, there being a new litter for each individual job, and so if we cut off the supply we will soon be rid of them; therefore I repeat, the old couple must be divorced. In other words, gentlemen, we can never establish a uniform system of measurements until we have a law that is sufficient of itself for all emergencies, without the assistance and support of customs, and it is my opinion that no law can be that, unless it be absolutely free from all exceptions, and based on, and not at variance with actual facts.

This will require that a cubic foot should be a cubic foot, no matter where it may be found, in a pier, in a corner, or in the heart of a straight wall, that a lineal foot should always be a lineal foot, and that a hole should be a hole whether it has in it four square feet or 400 square feet. And why should this not be so? Why should the state of Missouri declare, by a set of rules absolutely at variance with all common usages, that a stone pier has forty cubic feet in it when it has only twenty, that a stone wall is 200 feet long when it is only 180, or that a small pier has more in it than a large one, and a twelve-inch wall as much as an eighteen-inch one? Such rules are absolute and unnecessary contradictions of actual facts, and yet they stand as law upon the statute books today.

While the legislature was about it, why didn't it also declare that two feet of ribbon should make a yard, and that in measuring dry goods the corners should be doubled, or, to carry it still further, why did it not declare that two pecks should make a bushel and four bushels should make a peck? Now, that may seem ridiculous and silly, but it is in exactly the same line of reasoning that makes 22 cubic feet a perch, or that makes a twelve-inch projection, 12 inches on face and 10 feet high, have 30 cubic feet in it, while an eighteen-inch projection has only 25 cubic feet. In reality the latter has just 50 per cent more than the former, but by the laws of Missouri it has nearly 20 per cent less. In some way or other they have got it fixed so more shall be less, and less shall be more. If they would only extend that principle to money matters I would be an immensely rich man, and I'd take all of you out and set up the oysters on the half shell.

But all foolishness aside, it does seem to me, gentlemen, that it is wrong for any state to pass laws in direct contradiction of actual facts and unchangeable usages, for, as I said before, it cannot be expected people will look for or guard against such unnatural things, and consequently, they are liable to be misled and caused more or less serious trouble and disappointment, for in many cases work will cost double what would naturally and reasonably be understood by the contract. It seems to me such legislation ought to be unconstitutional. I don't know how familiar most of you are with the present law, and I have not time to go through it in detail, but by examination you will find the points I have called your attention to are not exaggerated, and if you will read the law through carefully you will find it in many other cases imperfect, insufficient, contradictory and unjust, not to say anything about its being unintelligible, for the truth is, after reading it through a few times you will be unable to decide whether it is a fairy tale or a Chinese puzzle.

Now, why is this law in such a bad condition? Simply because, instead of being a plain, straightforward, truthful statement of facts it has been so overloaded with unnecessary and uncalled for exceptions and untruths, and in consequence thereof, has been so subjected to the modifying influences of customs that it has become practically unintelligible and incapable of being interpreted alike by any two persons. Now, what we want is a common-sense law, based on, and not at variance with, actual facts, and one to which the ordinary rules of calculation can be applied without making the figures lie and contradict each other at every turn, and one that two or more persons can apply with somewhere near the same results, and it should be so plain and easily understood that anyone familiar with the ordinary rules of arithmetic can understand and apply it whether they be in or out of the profession.

It should also be in harmony with common usages as applied to other things, and absolutely free from all claptrap provision for unwary and unsuspecting people to be caught by, such as saying that a small pier has more in it than a larger one, or that a wall full of holes has as much in it as a solid wall, etc. Now, what law or rule will cover one and all of the above requirements I have mentioned, as well as all good ones I have not mentioned. I answer in these words, actual net contents. Of course it would

be necessary to use more words than these in the rule itself in order to make it certain of being understood, particularly as people have become very much confused by the old rule, but after you have elaborated all that is necessary, you should still have no more than is really expressed in those three words. The rule, however, could read as follows for stone and brickwork: "All brick and stonework shall be measured by taking the actual net cubical contents of same, allowing, in the case of brickwork, $7\frac{1}{2}$ brick per superficial foot, for every half brick, or practical part thereof, in thickness."

Now that means that a hole is a hole, and a projection a projection, that 18 inches is more than 12 inches, and that a large pier is more than a small one, and if this is not more in accordance with common usages and actual facts than the reverse would be, then, in the language of my rule, is K. I. called in. I also think a rule of this kind would cover every possible case that can arise, as well as be simple, plain and equitable alike to owner and contractor, and it would do away with all opportunities of sharp, shrewd, scheming contractors to mislead innocent and unsuspecting owners. I am well aware I have taken a radical stand, but I invite and expect criticism. If anyone can point to a case or a combination of circumstances which my rule will not cover as well, if not better, than the present one, I shall certainly be glad to have it done. I have not had time to look this matter up enough to formulate a final rule, and, therefore, I am open to suggestions, and I hope this will call out the experiences and ideas of every member here. It is a commonplace subject, and one that all have had experience with.

I had intended to take up separately the things, such as painting, plastering, concrete, stonework, brickwork, etc., that a uniform system of measurements would be supposed to include, but I found I did not have time to write it down, and I can't get at it in any other way. However, I will say that the actual net contents idea, should, in my opinion, be carried to the bitter end, and I think there is no case such a rule will not cover. I might add that we are not bound to be governed by state laws, but can establish rules of our own, and by basing contracts on them they would govern, no matter what the state law says. I brought the state law so prominently to the front for the reason that it seems to coincide with and form part of the present system or rules. I might have used the term rules instead of state law, but still I think it very desirable that if we have any laws or the subject they should harmonize with the rules of practice.

On motion of Mr. Illsley, a vote of thanks was unanimously passed for Mr. Carman's valuable and suggestive paper.

T. B. Annan: I believe it is in order to follow up this matter by an expression of opinion on the part of individual members. I would like to say that some years ago, I don't know what the practice is now, in the work in the charge of the United States Government, particularly that in charge of the engineer corps, they adopted just the plan of measurements that Mr. Carman seems to have hit upon, of calling a cubic foot a cubic foot, whether in Alaska or Texas; of saying that a superficial foot is a foot of twelve inches one way and twelve inches in another. I was told by Captain Davis once, at Salt Lake City, about his experience in getting the consent of the local contractors to figuring on work for the government in that way. They had been so accustomed to these double measurements that they could hardly be persuaded to make their estimates on any other basis. They finally consented to have their work actually measured for what it represented, just as Mr. Carman has suggested. They had hardly made out their vouchers before they were completely satisfied. He told me, personally, that you could not get a man of them to go back to the old system in bidding on government work. I think this is in pursuance of the idea suggested, also, at the Western Association with reference to the adoption of a uniform system—that is a metrical system. I think that is closely related to the same subject, and one that we are all interested in. That is a piece of personal experience that I wanted to bring to bear on this paper.

F. B. Hamilton: I think it would be well, perhaps, for all architects to specify just how their work should be measured. In Kansas City architects have a great deal of trouble of that kind on account of the uncertainty of the depth to which a foundation goes. They cannot always tell how deep they will have to go. I have been in the habit, during the last year or two, of specifying, in a case of extra work, that the foundation of the work shall be measured according to its cubical contents, both in regard to rubble work and dimension work. By adopting that course I have had no trouble.

The President: The chair would like to add another suggestion on that subject. I would like if Mr. McNamara would make a few remarks about the experience he had some years ago on that question, when they had so much trouble about the measurements of the work on the reservoir.

Mr. McNamara: That was not a question of measurements. This question did not enter into it at all. It was a question of definition of terms—of a distinction between rubble work and range work. The engineers and myself, and most of the old workers, called rubble work what we now call range work, or broken ashlar work. The difference of the measurements of this reservoir amounted to something over \$300,000. A committee was appointed to determine this matter, but an injunction was placed upon the committee, by the court, which forced them to appoint commissioners. The contractors selected one architect, and the city appointed me, and we two selected a civil engineer. The majority report, which was made by the contractors' architect and the civil engineer, was presented for decision. The claim amounted to nearly \$500,000, against the city, made by the contractor. I allowed him something over \$20,000. In arriving at my estimate I went through a system of testing. I had men employed for the purpose of mixing the quantities, and I found that the actual gain in all that work did not amount to over \$20,000. My report was accepted, and the whole thing was thrown out of court. There was no question as to the manner of measuring, but it was a difference in the terms between what architects call rubble work and dimension work. The engineers' specification was clear and distinct in every particular, although the terms were not our terms, and the specification as to the manner of doing the work was clear. I held that the contractors bid to do the work on the description and the manner in which it was to be done, and not on the mere terms. That seemed to hold good with those who examined both reports. It very often happens that architects are not specific, and it is something they should avoid. They will use the term, "a first-class job"; that is all there will be of it. There will be a great difference of opinions as to what a first-class job is. I would have a general description of some work that it should be done like; I think it ought to be actually described in detail how it is to be done. The phrase, "a first-class job," means nothing at all. It was on such hinges as that that this whole trouble came up. So much for that. Now about actual measurements. Of course the government of the United States, throughout the whole country, as I know, measures by the actual quantities. Our different measurement is that we allow double for corners, because we allow the

mason that much for the extra trouble of setting his corner-stone and plumbing. We allow him the openings in stonework, because it is as much trouble to set the stone for the opening as if the wall was build solid. It is as much trouble to build jambs as it is to run the wall up solid. But I don't think it concerns us whether the state laws or the government laws call for one thing and we call for another, if the architects' system is universal. If all the architects in the different associations of this country could agree on a system of measurements, whether it is the actual quantity, or whether they allow for these things, it would make no difference to us. Every man who takes a contract from an architect does it with a clear understanding of the manner or system of measurement. He understands, or should understand, just what he is figuring on, and it should be clearly stated in the specifications, for instance, that 22 feet to the perch for such work is meant by the architect. But what is needed is a schedule of the method of measuring among architects. I think that is very important. You never can get one state to pass laws that will be good in another state. You can get all the architects in the country to agree upon a certain manner of measurement that could be printed in the same way that a schedule of prices is printed. I would be in favor of endeavoring to have a uniform system of measurement among all architects, and I would not bother at all with the state laws, or try to incorporate it into statutes. The government, of course, has a uniform system, and that is the actual quantity only, in anything they measure. I speak of brick and stone work only. For painting, and such things, it would be very difficult to establish a law, unless the actual surface was measured.

Mr. Carman: What would be your idea of measurement for such things?

Mr. McNamara: I don't think it is the time now to sit down and tell what I would wish to have done about it. It is well understood in this city about measurement. There is hardly any difference in the manner of measuring among our architects.

Mr. Carman: If you get a case in court don't they vary right straight along?

Mr. McNamara: They might, but they don't do it.

Mr. Carman: I don't think a case ever went into court in Kansas City where any two people agreed about this thing. I have had experience of that kind and so have others.

Mr. Legg: I do not understand, Mr. President, that we have any laws regulating the measurement of materials in building, aside from what custom has made. We have no state laws to regulate how much is a perch, or how you should arrive at the amount of the cubical contents in a wall.

Mr. Carman: There is a state law; I have it here in my hands. It takes about six hundred words to embrace it all.

Mr. Legg: If there is any law, I was going to suggest that it was in the hands of the architects to make a custom, and to satisfy our profession in that way. I think it would be within the province of the convention to appoint a committee to arrange a system of measurement to be adopted by all the architects of Missouri. You could do it without interference with the state laws, and I think it would be a good thing. I would suggest that such a committee be appointed, and we could control the matter within ourselves.

The President: Gentlemen, the chair thinks that the question is one of sufficient importance to have a committee appointed. I think it would be well to have a committee appointed to examine into this matter, and to see whether the custom cannot be enforced throughout the state, or have the state law amended. This matter could be done by the Executive Committee. When this was properly crystallized into shape, it could be sent about to the different associations of architecture in the state, and bring around a uniform system among architects all over the state. I believe a committee appointed for that purpose would reach the trouble.

Mr. Chamberlain: I think it should go farther than the state. I think that this committee, if appointed, should confer with committees from other states and with a committee from the Western Association, and have some rule formulated by which it would become, eventually, universal throughout the country, as well in the United States as in this state. I think that would be the better way.

The President: I hope some gentleman will make just such a motion.

Mr. Illsley: I am ready to make such a motion, and say something in favor of it. I very much distrust state legislation. You get it fixed by one legislature, and the next legislature will change it all. But we can make a mutual agreement that will not be subject to change until we alter it ourselves. I am much interested and also surprised to learn of the trouble experienced in Kansas City; I did not suppose that there was any difference between that city and St. Louis in that respect. We have our customs here, and I have had no trouble with the measurements, and have never known of any trouble. The actual contents of a wall is a matter of no consequence to anybody, so long as you get your building as cheap as may be. You make your plans and specifications and you ask for bids to erect a wall according to those plans and specifications, and neither the owner nor anyone else cares how many cubic feet it has. When you work in that way I don't see how it comes in at all, except with extra work. There, I think again, it is not so much matter whether the law is mathematical, or whether it is according to custom, so long as we get the best results. As long as we figure in that way, and as long as it gives us no trouble, I should hardly think it worth while to make a change. Our contractors are not scholars, and it is hard for them to learn a new way. They are not accustomed to figuring in this proposed way; they have got their prices fixed, and it would be some trouble for them to change, though the government may do differently. With us the custom works harmoniously, and I would hesitate to try to train contractors to change their custom. I would rather try to get on in the old way. I believe I could do more in the course of a year.

Mr. Ramsey: While I cannot plead any personal difficulty or trouble with the present system of measurements, I think it is, perhaps, owing to the fact that I recognize always, in settling a bill of quantities with a mechanic, that there is room for a considerable difference of opinion. I

have not always insisted upon holding him down to what might be the minimum quantity of work done. I know there are inaccuracies in the manner of measuring masonry, and often a contractor gets paid for more than he really deserves; but as the contractor generally has the making out of the bill he seldom ever gets paid for less. While I have not, as I say, had any personal trouble in this matter, because I have managed to steer clear of anything very bad in that shape, I have always, where there was extra work, got the measurements generally from some of those men who make a business of measuring for mechanics and who do follow a certain rule. That is the rule which I have adopted. Of course, I have seen cases, in passing upon a bill, wherein the contractor got pay for things that he actually should not have been paid for; but, still, according to the rule of measurements he could plead that he was entitled to it, and, of course, I have passed it by and have allowed him to have it, simply because I knew it was useless to contest the question. But I would like to see a more simple and a more equitable way of measurement. Now I think it would be much easier for the profession, and much simpler, if we should appoint a committee to frame a rule by which we might have our work measured, and as a state association agree that we will adopt that rule whatever it may be. Let this committee make it as equitable as possible, and weed out all objectionable points that they can possibly do. If it is thought best to have an absolute measurement of quantities, and nothing more than absolute quantities, let it be that rule. I, for one, think it is best to make some few small allowances such as measuring corners double and allowing for simple openings measured as solid in place of measuring them as openings. Those are a few things that would work no hardship upon any body; but it is upon this point that the question strikes the owner. I find with the law as it now stands, with its changes and technicalities, that the contractors can take the plans and can claim allowances to the disadvantage of the owner. In other words, he often bids to do work on the basis of actual quantity, and then he claims for all these allowances when he brings in his bill. And, of course, as long as it is the state law, what are you going to do? You have got to submit to it unless you have a special contract to the contrary. Now I can see no reason why piers should not be measured for actual contents and for nothing more. If it should be an isolated pier let it be measured for the isolated contents. If it is a buttress let it be measured for the actual contents; whereas by the lawful way the contractor is allowed two or three measurements because it happened to be a pier or buttress. When the contractor looks at the plan before he makes his bid he knows there are piers here and buttresses there. If he finds he has to carry a pier down to a greater depth by two, three, four or five feet to secure a better foundation, why should he have two or three measurements for it? I would like very much indeed to have the measurements simplified. I think we can accomplish this better within ourselves than by going to the state legislature. The state law is of no particular advantage to us if all the architects in the state work upon a uniform basis of measurement. They might have printed slips made of their rule or plan of measurement, and paste that to their specifications every time they wrote one, and then the contractors would understand it and know that they have got to work under that rule of measurement; and in case there is extra work then they would know they must make their measurements according to those rules. If there is no extra work, the contract bid settles it. Now I know this to be almost the universal custom in measuring. They will come into my office, measure up the contents of a job, and put in their bid; and I find it almost universal with them that they do not measure these piers as double or treble; but they base their bid upon the actual cubical contents of the work, and yet if there happens to be one or two extra feet of depth they will come in for a double measurement; and every time I have been compelled, as I say, to allow them that simply because it was a state law and the custom, and I have always thought it politic to allow it rather than try to contest it, for the reason that if it was taken into the court they would get it with interest, and costs added. I think everything that has been said here shows the necessity of appointing a committee to make the system of measurements more simplified and uniform, and I would like to have some member make a motion to that effect.

Mr. Illsley: I make a motion that a committee of three be appointed.

Mr. McNamara: I do not see the good of confining this work to a state association. Suppose you appoint a committee to make a uniform system of measurements for this state. Architects here may have work in adjoining states where the system is entirely different. If the system should be formulated from a committee of the Western Association, I can see some advantage in that, for the members of that association are representatives from the different states. It would be no more use to form a committee to go to work and formulate a uniform system for this state than it would be to have a uniform system for this city. It is just the same thing; it would not help us for building in Kansas City; it would not help us in the adjoining states.

Mr. Ramsey: I think if we start in this state, and get the thing regulated in Missouri, that we can go before the Western Association at the next annual convention, and adopt the same rule, or a similar one, for the entire territory; then our rule for the State of Missouri could be set aside for their rule, and we would have the advantage of uniformity. We must start somewhere. If you never start it anywhere it will never be done.

On motion by Mr. Illsley, it was resolved that the chair appoint a committee of four to devise a system of uniform measurement for adoption in the State of Missouri, this committee to report at the earliest day practicable to the secretary of this association, who shall have the same printed and forwarded at once to each architect in the state, with a recommendation that he adopt it as far as practicable.

The president appointed Messrs. Carman, of Kansas City, and McNamara, Illsley and Mitchell, of St. Louis, on this committee.

The President: Mr. F. B. Hamilton is down on this list for a paper entitled "Certificates of Membership." The convention would like to hear from him.

Mr. Hamilton: The Western Association discussed that question at their last meeting, and the expression of opinion seemed to be against the

issuing of certificates of membership. I am opposed to it myself, until we arrive at something more substantial in the way of organization. I don't think it amounts to anything more than a receipt for dues the way it stands now. If we had an examination before the applicant became a member, then it would amount to something. The question of a certificate for our association reminds me of a story published in Harper's Magazine some years ago by the Editor of the Drawer, although it has no application in this case. A servant girl living in Albany was about to remove to New York City, and she got a certificate of character to take with her, written by some friend of hers. On the way down to New York she, in some way, lost her certificate, and on her arrival in New York she applied to a friend of hers to see if he could not help her out of the difficulty. He took a piece of paper and wrote: "This is to certify that Mrs. Maloney had a good character when she left Albany, but lost it on the road coming down." (Laughter.) I made a few notes in relation to this action taken yesterday in regard to the proposed law to be presented to the legislature for the licensing of architects. For the information of members I will read the scheme, which has been provided for the Royal Institute of British Architects, passed April 6, 1886. "The Royal Institute shall be empowered to issue to its members declarations of fact in the form of certificates of examination which may be deemed desirable or convenient for recognition, as may from time to time be determined by by-laws." The third clause in Article III provides as follows: "Every professional member shall be entitled to obtain from the Royal Institute a certificate of membership subject to such conditions, and on payment of such subscriptions or other sums as the by-laws may from time to time prescribe, and shall, so long as he continues to be engaged in the study or practice of architecture, be entitled to obtain from this council, in every calendar year, a renewal of such certificate of membership, at such times and on such conditions, and on the payment of such subscriptions or other sums as the by-laws may from time to time provide; and any fellow associate, ceasing to be a member, shall, on demand, deliver back to the council his certificate of membership." In the *American Architect* is published a scheme for these examinations. In Vol. 9, page 53, is a specimen examination. It is an actual examination, giving the questions answered, and giving the number of marks of each of the different varieties of examinations. This is all I have to say on that question.

Mr. Charles K. Ramsey was called upon to read a paper, entitled "Plans and Specifications—preparation of and supply to contractors—ownership of."

Mr. President, the preparation of plans and specifications, of course, you all know, should be done with the greatest care and precaution, in order to render everything clear, distinct, and comprehensive. I think both contractors and owners should know exactly what they are to get. In other words, what the contractor is expected to furnish, and what the owner is expected to have. Without this care in the preparation of the plans and specifications, of course disputes will naturally arise, and the owner will think he is swindled, to some extent. The contractor, of course, naturally thinks you are trying to get more out of him than he ought to furnish, and the owner thinks he is not getting as much as he ought to have; so the architect cannot be too careful and too thorough in the preparation of plans and specifications. After the plans and specifications are once thoroughly prepared, and the corrections all made, of course a certain number of duplicates, both of the plans and specifications, should be taken, after which, I think, that at least one set of plans, at least of that which is considered original, should not in any case be tampered with, or changed in any way. The changes and additions in a plan, and the manner of constructing a building, which, of course, naturally follow, should be done by separate and distinct drawings and writings, added to the specifications, and clearly and distinctly identified as such. Now, in regard to the furnishing of the contractors with the plans and with the specifications, my plan has been this: To produce a sufficient number of duplicates, both of the plans and the specifications, by using either the process of tracing, or the process of blue printing, which is now in common practice. And in regard to specifications, I use this plan: I have my specifications written and carefully gone over. They are written in copying ink of some good, strong quality; and after they are thoroughly prepared, they are placed in a copying-press, and I take from two to four duplicates on thin paper with a letter press, so that for each set of specifications I have an original, and from three to four extra copies. Now, these letter-press copies I distribute among the different contractors, so that the carpenter, and the stonemason, and the brickmason, and the planing mill man—and all those who need them—may have no excuse for their not having them. I have little trouble running the work smooth and straight. In that way I am able to give each contractor all the information he needs. Of course, with a system of blue prints, we can make as many duplicates of the plans as we please. Then every man has his own information given him, and he is expected to follow it. Of course, that plan necessitates a little expense upon the architect. It imposes upon him a little additional office expense. Of course, under that system he has to bear that, and it reduces his profits to that extent. I don't know whether that system is followed by all architects or not. I think it is one that should be followed by everybody.

Now, in regard to the possession or ownership of the plans. It is hardly worth saying much on that subject, as it is a well established rule that the plans and the specifications, and I take it, all of the duplicates that are made from the plans and specifications, are, at any rate, the property of the architect; and, of course, at the expiration of the job, should be returned to him. In fact, I make that agreement with every contractor that has anything to do with me, that he shall return the plans and specifications—bring them back to my office, in good or bad condition, whichever it may happen to be. It has always been a disputed question between the architect and the owner, as to whether the owner is entitled to a set of plans and specifications for his building, or not. I believe that about one-third of the clients I have worked for have applied to have them. Of course, legally, I have always taken the stand, and I tell them plainly and promptly, that they are not entitled to anything; that the plans and specifications are simply the instruments of service, and as such, they have no right or title to them whatever. Still, at the same time, I have made it a practice that where the owner wished to have them after the completion of his job, for reference or something of that sort, as a matter of courtesy, I have always furnished him with the drawings. I have always given him a set of designs or blue prints. I have never allowed him to have possession of anything in the shape of details. I would like to hear from other gentlemen on this same subject.

Mr. Carman: I think Mr. Ramsey's suggestion about specifications a good one. It is an expense to the architect, although in reality it works in the end, I think, the other way. It saves the contractors trouble, and they are more apt to do the work as called for. Consequently, it usually acts as a saving to the architect. I think it is an excellent idea. But I don't know about these separate copies, whether they would be lasting enough on this thin paper.

Mr. Ramsey: I will make an explanation of that. If I had thought of it, or if you gentlemen wish, I can send to my office and procure some copies of duplicate specifications. It is a system I have adopted myself; I have been using it myself, but I don't know of anybody else using it. I find it works well. In the first place I have them written on the type-writer, and I have a complete set of specifications written out. Then I have them gone over very thoroughly until the errors, as far as possible, have been eliminated, and such additions made to them as are necessary, and when I am done with them they are supposed to be complete and

comprehensive. Then I use this manifold paper as it is called. It is a thin paper and very strong. With that manifold paper I can take one sheet of my specifications and place upon the top of that sheet three or four or five sheets of manifold paper; the number is optional with the architect. On the top of that I have a prepared blotter of any kind, of sufficient thickness. I use a blotter made from cotton with a rubber filling in the middle of it, so that I can use both sides of the same blotter. Both sides will work and prevent the print from striking through on the other side. I place that blotter on top of the specifications. The blotter being double and thoroughly saturated upon the other side, I place the desired number of sheets of manifold paper on the top of the original sheet of specifications, then over that I put an ordinary dry piece of blotting paper, and repeat the process, and so I go on piling up the sheets of specifications in that way, then I slide it into a letter press and turn it down as tight as an ordinary press, and let it remain there for several hours. Sometimes I let them remain in the press over night and take them out the next morning, and I have just as many copies of that specification as I choose to take, all done at one time. Of course, the boy in the office does it, and it will take him perhaps half an hour to pile up the specifications in that shape. The next morning you have the original and the duplicates, and there is no question or dispute about their being alike.

Mr. Illsley: I would like to ask Mr. Ramsey what arrangement he makes about possible errors and omissions in plans and specifications.

Mr. Ramsey: I have to state in regard to that, that all plans and specifications will be more or less erroneous. A man cannot make a set of plans and specifications without there being some errors. Then, again, as the building goes along, one wants to make changes; but these changes can be provided for separately. That is, the original set of plans and the original set of specifications can remain just exactly as they were made, untouched, unaltered and unchanged in any way, then, of course, they are always a matter of reference; then when the building is completed, the changes will show for themselves. No erasing or changes should be made in any plan or specification after it has once been turned over to the contractors for bidding. The contract is based on that plan, and it should remain in the original state without change.

Mr. Illsley: I want to say a word upon that point. In regard to changes, I think it is very necessary that there should be an entire understanding between the owner, contractor and the architect that there should be no change made in the body of the papers. It should all be done outside. My rule is after a bid comes in, never to make a change in the plan or specifications, except in such a way as to show that it is changed. If I can I put it in red ink on the back of a drawing, making the change clear. If the change is in the specification, I put it on the margin, so that there may never be a dispute in regard to errors, mistakes or omissions. I think it is true that it is impossible to guarantee that your plans and specifications shall be perfect. I would be glad to know what system there is for that. Years ago, when in the engineer's department, I came across a method of figuring up bills, which seemed almost to guarantee against mistakes. The plan would be to have two figure together on a bill. Each one would figure separately and then compare their work. I find that a very good plan. I have wondered whether some sort of an arrangement might not be made that would reasonably guarantee us against other mistakes. Years ago I was planning a house, and I intended that a certain closet should have six shelves, on three sides, all around. When the house was nearly done, I found they were going to put drawers in all these places. I turned to the specifications and I found I had actually written drawers instead of shelves. Slips of the pen are apt to happen. I wrote a specification once wherein I described certain iron stirrups, saying there were to be four. Since then I found that there should have been eight. I always put in my specifications, in the preliminary part, that the contractors shall take no advantage of manifest errors or omissions in the plans or specifications, and that they are expected to report such before bidding, or no allowance will be made for them afterward. I am sometimes met in this way: They say, "You are an architect; you are paid for your work, and it is your business to make your work perfect; if there is any omission in your part, you must not require us to note it; we have the right to take advantage of it." I say on the other hand that, "While it is true, as between the owner and myself, that I am responsible for errors, yet, as between myself and the contractor, when he sees a manifest error, he should mention it; it is not fair in him to take advantage of it. The architect is required to provide for all parts of the building. He must care for the masonry, for the excavation, for the brickwork, for the plastering, the painting, the plumbing, and so on. Here is a vast amount of detail. Now the various contractors who figure to do this work, have each to deal with only one branch. The brick-maker has nothing but his brickwork to look after; the plasterer nothing to care for but the plaster, etc. It is comparatively easy for him to discover if there is an error in the plan or specification. I say to him "I expect you to deal honestly with me, as I do with you, and I will make no allowance for omissions and errors that are upon their face manifest." That is the rule I have adopted.

Mr. Hellmers: I would like to ask you in what way you determine whether the contractor so figuring discovered that error or not? You say you will not bind yourself to allow him anything if he comes in and makes a claim on that error. You base that action upon the idea that he will discover the error. Now, why shouldn't he be just as liable to miss that error as you? How do you determine whether he discovered it when he put in his bid, or whether he, like yourself, did not discover it until he came to execute the work?

Mr. Illsley: I generally meet it in this way: When the error is plainly such that the contractor could not detect it, I am responsible. I have never had any trouble in settling on that basis. I do not hold the contractor responsible for not informing me, unless it is something that could be plainly seen, and that the contractor might reasonably be expected to discover. In the matter of the description of work, where technical terms are used, I have a different method. A very fair way, in my experience, is to describe the work by sample. Architects may differ as to what is broken-range work or broken ashlar. If I can, I refer them to a building

where that kind of work is to be seen. I find that works well, especially in regard to painting. There is also a question about when a contractor has a right to his details. I finished a job over in Illinois some years ago, where I was involved in trouble-quarrel with the owner because I did not give him the details when they first figured on the plans. He wanted to get some bids in Chicago, and the Chicago parties objected that they could not figure on the work without details. It was an extremely busy season of the spring, and I could not make my details then. I said, "It is not customary; we don't know until bids come in whether the house will go on as originally intended or not. If I make the details now, they may have to be made over again. Who is going to pay for altering the details?" He replied by saying that the Chicago parties said it *was* customary. I had to employ an attorney to collect my commission. I want to know what others have to say about when the details are to be furnished. Then, again, as to the ownership of the plans. The owner comes for plans. You go to work on them, and, by the time you get them completed, perhaps, something may happen to make him change his mind. He may select another lot, or have some other reason for not building at once. Then you tell him, "I will collect my bill and take back my plans." He says, "What will I have for my money?" Then how many copies shall you furnish? My custom has been to furnish only two copies of the plans and specifications. There are cases where more might be desirable. I would like to know what experience other architects have had.

Mr. Annan: I can give Mr. Illsley a leaf out of my book. I furnished in one case four copies of the foundation plans. The plumber lost two sets, the contractor lost another, and now I have nothing but my original drawings in the office, which, in accordance with the practice of most of us, are in pencil. I have nothing but a pencil memorandum. I believe I have made six sets of foundation plans for that building, and all I have to show are some scattered notes of blue prints and some original pencil drawings.

Mr. Ramsey: You are exceedingly good-natured.

Mr. Annan: Now, right there, I want to answer Mr. Ramsey. It is not a question of good-nature at all. The plumber came in and said, "I can't get at that system of drain pipes; won't you be kind enough to loan me your blue prints?" I want the work to go on, and furnish him with them, with the expectation that they are to be returned. They rarely ever are returned. That is my experience.

Mr. Ramsey: When a contractor borrows the tracings and loses them I would like to inquire who is to pay for the lost tracings?

The President: The man who loses them, of course.

Mr. Hamilton: I have heard architects say that they rather hesitate about exacting money from contractors in cases of that kind.

Mr. Ramsey: I don't think an architect ought to have scruples of that kind. If an architect has a set of tracings, or blue prints, or whatever they may be, and a copy of the specifications, and a contractor takes them out of the office, of course, for the time being they are in the custody of the contractor. If he loses them, I think he should pay the architect for reproducing them in case the architect chooses to charge him for it. The architect has simply rendered extra service, not to the owner in fact, and not to the builder, but extra service to the contractor, and the contractor is as much obliged to pay the architect for the service rendered as anybody else. And I don't see that there is anything wrong for him to charge whatever the tracings are reasonably worth. I don't think the architect, in that case, would be entitled to charge the contractor an extra price. In other words, if it cost him simply a matter of a few hours' work of the office boy to reproduce the tracings, he is not entitled to charge him say fifteen dollars for doing it. Charge him a reasonable price for the boy's services while he is doing the work, and for his material, and the use of the implements, to cover the cost of making the tracings. It is merely for mechanical service that you should charge him, and not for any extraneous labor.

Mr. Illsley: I think this subject came up before the American Institute and it was decided that it was better to get it from the owner; to charge it to the owner instead of having anything to do with the contractor, as it might lead to unjust suspicion and trouble.

Mr. Carman: Mr. President, I will simply say that I think the details are a part of the drawings and are due at the same time; that is my opinion.

Mr. Ramsey: I will say that there are a certain kind of details that an architect can make out as soon as the drawings are made, and on the other hand there is a large percentage of the details that cannot be made until the job is under way. There are measurements that you cannot give correctly, especially where the finishings are elaborate and particular. You must have your building in shape before you can make the details. It is impossible to furnish all the details of the job at the time the general plans and specifications are made.

Mr. J. B. Legg read the following paper, entitled, "Professional Etiquette."

Professional etiquette or ethics in architecture is the written and unwritten law which regulates our actions in our profession and practice, and is founded on the golden rule, "Do unto others as you would be done by," and our profession must heed and obey its precepts.

Architectural etiquette not only defines our relations with others of our profession, but equally as regards our clients and the artisans who execute our designs, and demands that we should ever be on the alert to act justly and honorably with all men of our profession, by our clients, and with all contractors and mechanics over whom we supervise.

All occupations, professions, trades and vocations in life and mutual dependence exist under this moral obligation, and we should ever recognize this bond, from which no one is free, and without its enforcement and compliance no industry can flourish or profession thrive.

Our moral obligation is the standard germ of our success, and the higher the moral and the more exacting the standard, the greater will be our eminence and influential usefulness. If this code of ethics should be observed in the lower walks of life to enlighten as a guiding star the mechanic and artisan, how much more should it be observed in the arts and sciences, of which our profession is the most noble and enduring.

As scientists and artists our labor is the product of our minds, which once transformed into substance, goes forth beyond recall to enrich those who live after us, and while we should profit by the examples of others, we should be too generous in our natures to appropriate as ours the genius of our fellow architects or supersede their moral rights.

The etiquette of our profession is too vast to be written, but there is a law to govern and established usage to guide, and our conscience should be an infallible judiciary to decide, and the ennobling actions of our fellowmen a power to protect, and in short, the

science which treats of human actions, right or wrong, in the practice of human life, is the etiquette of our profession or vocation.

It is of the right I wish to speak, and of what should be formulated by such practitioners as were upright and honorable, who have, by their actions and conduct given credence and approbation, and established a proper usage.

There is no written law of etiquette, but the feeling of honor, self-respect and the esteem and protection which we desire to gain, actuates us to render to others what we exact in return, and this is the great law of our etiquette, given us by usage in our profession.

Ours is a creative art, with its memorials to mark every epoch of time, from the architectural pyramids in the early history of Asia, and the rock built temples of India, to the palaces of justice, temples of art, literature and commerce, and ecclesiastical edifices and monumental works of today, giving the history of the peoples of all ages in enduring hewn and carved stone, for the instruction and admiration of future ages.

There has been lately a great deal of aspiration and effort to give the profession of architecture its proper place, or deserved consideration, in the American community.

The architects of our country have gained greatly in influence and respect during the last ten years, and in our central and western states more especially, in the last five years, and the most obvious reason why they have gained more prestige of late is because they have become a body and formed themselves into a class of men, filling a special function in a uniform way, and with more or less common understanding among them.

This common understanding and unison of action to promote the good of our profession at large and benefit every individual member of our fraternity is the etiquette of our order.

As our western towns and cities grow in population and wealth, architects become more common, and our position and influence is determined by the success and actions in our individual effort to gain a livelihood in our practice, and it is very slow that we are accepted as a class, and that any defined usages grow up in our relations to the public and to our clients.

To bring about more closely our relations to each other, to the public, and to our clients, and to work as one body of men, united in one common cause, to improve the architecture of our country, and honor the dignity and standing of our profession, should be our individual and united aims and ambition.

Our ethics should bind us in a union of brotherhood that would universally lead the public to recognize us not only as architects, but to accept us as the authoritative arbiters of all manner of design among people at large, and as authoritatively responsible in our manner of dealing with all men.

If we consider how far we are from having an accepted standard of taste, style and practice among ourselves, we must but conclude that as much confidence is given us as we have shown ourselves entitled to.

It should be remembered that respect is not a gift, but a tribute, and the individual, or the body who would require it in a community as independent as ours, must compel it.

The tribute of respect is won by some architects through their talent and business capacity, but the success of the profession will be unsatisfactory so long as its standard of performance is uncertain.

Architects cannot expect to lead the public taste as long as they pull in a dozen different ways, and our remedy is a closer association with each other, such as this society affords us, not simply for defense, but for improvement.

A profession in which every member works alone, imparting neither his aims or his experience to his fellows, does not deserve to be called a profession.

Interchange of ideas and experience, the stimulus of common study and criticism, and a hearty interest in the same problems, will be the most powerful influence in giving character and unity in our work, as well as insuring the support of the public.

Professional etiquette is a matter of dispute, and should be looked upon with impatience by clients, and that part of the profession who caters only to the success of the moment.

Social and professional etiquette is a restraint to the natural impulses of persons who are not accustomed to it, and people do not submit to restraint unless they have been born to it, or have deliberately imposed it upon themselves.

The economical advantage of a professional etiquette is that it saves us from the loss of time and effort which comes of disorderly strife.

We, as architects, must acknowledge the harm that is done, the time wasted, and the demoralization caused among us by unregulated efforts to get the better of each other, and by the desire of unreasonable clients to get the better of us.

We well know that competition is a bulwark against courtesy and fair dealing, and divert our ideas from quiet judgment; and such influences unrestrained from custom leads to lawless confusion.

The wasted efforts in our competitions generally brings to the front, not those who are best qualified professionally, but the best fighters and wire pullers, and the public are often led to believe that the winning man means prominence and merit.

The etiquette whose office it is to defend us against such troubles is certainly the care of ourselves as architects, and as members of an architectural organization.

Architects frequently complain that the profession does not receive the consideration it merits from its clients and the public; that competitions are offered on humiliating terms, and that they are restricted in their professional authority and proper remuneration, and this is measurably true, and the trouble is the cause of the architects themselves.

The public expects the architect to waste his time in fruitless competitions which are frequently not intelligently or honestly decided, all growing out of this cut-throat competition, which is the bane of our profession.

I hope to see the day at an early date when every member of the Missouri Institute of Architects will not dishonor his profession by stooping to enter a competition, unless the same is a limited and paid competition.

Architects sometimes intercept work that would fall into the hands of others of their profession, by offering to do it for less money, or by offering to submit sketches free of charge unless accepted, and this cut-throat business not only robs our profession of the legitimate fees which rightfully belong to it, but prompts the public to place but little value upon our professional services, all from the fact, that some members of our order place but little value upon their services.

The individual architect wanting his daily bread, and unsustained by his fellows, may be at the mercy of the public, or his client, but the profession is not.

The public too frequently characterizes professional etiquette as a code of defense, which, in the eyes of the profession, is but a restraining code to keep the members from interfering with each other, and from sacrificing their general welfare by working against each other.

We should carefully study the mischief of antagonism, and the need of common agreement and unison of action, instead of each one being obliged to conquer every position by self-assertion.

It is true that there is a wide difference in the susceptibility of architects, and that one will accept or even invite treatment which another will resent indignantly, and there are those who seem utterly careless of the claim of their profession to any respectable treatment whatever.

As regards the public, our etiquette is a compromise between the dignity of the profession and the pliability to its requirements, and desires fair and honorable dealing with it, as well as with each other. Architects must know that the interests of the public are the real interests of the profession.

Our general welfare demands that we should attract men of character, ability and acquirement, who would do their work well and receive an adequate remuneration for it, men who would respond readily to the wants of the community, remembering that while they have the right, and partially the power, to fix the terms on which they will do service to the community, it is for the sake of that service, and that only, that architects exist.

When architects besiege a person contemplating an improvement, knowing that another architect has done previous work for the same party, and is that party's preference, and offers to submit drawings free of charge unless adopted, and if adopted to do the work below the schedule of established prices, such architects degrade our profession and deserve to be frowned out of our midst, and shunned as a viper lurking to pierce our common interests with its venom.

When an architect is engaged on a set of plans for his client, and another one goes to him and agrees to do the work for a smaller rate of commission, and finds response from an unscrupulous client, who in many cases places the original architect's plans in the intruder's hands to be worked up, how are we to secure ourselves against such unprofessional conduct?

It was only last summer I contracted with a party to make a set of plans for a small dwelling; the sketches were made and approved, and working drawings and specifications ordered. When the drawings were complete my client took them from my office, under the pretense of showing them to his brother, and placed them in the hands of another architect, who agreed to do the work for half price, and I have not heard from

him since, except when I sent him a bill a few weeks ago, he refused to pay, alleging that I had only made him preliminary drawings.

The prevailing custom among some men in our profession of submitting designs and estimates for buildings free of charge unless adopted, has educated the public to feel that architects as a class place but small valuation upon their services, and in fact no valuation unless their designs are executed.

This feeling leads to all manner of impositions upon our profession, and is fostered to a large extent by the avarice of would-be architects in their attempt to get an occasional job, no matter under what difficulties or at what cost.

I am told that it is not infrequently that so-called architects hear of a party who contemplates the erection of a building, and bundling a roll of drawings under their arms, call upon such parties, offering to do their work for less than anyone else in the profession.

It was only yesterday, while returning from this convention, that I met with a brother architect on the street, who informed me that a friend of long acquaintance of his, had ordered him to get up a design for a residence, and when the design was submitted some four or five days later, that he was informed that five voluntary designs had been submitted for the same building, all on the hypothesis that if not adopted there would be no charge.

I am not one who believes that an architect should sit in his chair and await work to be thrust upon him, or that he should be too professional to advertise his business, but I do believe, that every architect should solicit his work in a legitimate, professional manner, always deporting himself in a manner that merits the confidence of his clients and the esteem of the public.

Every good word said, or deed done, in favor of our fellow architects, is a germ planted, that awakens in the public a confidence in our etiquette that engenders to our standing and usefulness, and paves our pathway to a better remuneration, fairer recognition, and higher esteem by all men.

Mr. Hellmers: I had prepared a paper on the subject of Lien Laws which I had intended to read, but as the time is getting very short, and as the hour for adjournment is rapidly drawing nigh, and my paper is largely advisory, I simply move that it be filed with the secretary and printed. The motion was unanimously adopted. [Mr. Hellmers' paper not being received before going to press, publication is deferred. —ED.]

Mr. McNamara: I move a vote of thanks to Mr. Legg for the very clear and excellent manner in which he has defined professional etiquette. In connection with this subject I offer this resolution, as it has been touched upon somewhat today.

Resolved, That the thanks of this convention are due and are hereby tendered to the directors of the Mercantile Library Association of St. Louis for their action in selecting the architect for their new building without resort to the pernicious method of a public competition, thus conforming to the almost universal sentiment of the architectural profession.

Mr. Ramsey: I think Mr. McNamara should explain that resolution, as there are some gentlemen here who don't know anything about the circumstances of it. We have gentlemen from Kansas City here who perhaps have never heard of the Music Hall Association competition.

Mr. McNamara: I presume they don't want to know anything about the circumstances of it; they only want to know that an incorporated body wanted to put up a building for a mercantile library here in this city, and they selected an architect directly for that purpose, and that is what we wish to be done in all cases. That is the universal wish of architects, instead of going into a competition for designs. I may as well say that the Western Association has set its condemnation on all occasions on this system of competitive designs. After all, it is the architect that does the best wire-pulling, that will be selected. It is just as well for the parties to select their architect at once and save all the annoyance and trouble which they cause other architects. In this case the directors of the Mercantile Library acted upon that principle. That is the first instance in this city where such a thing has been done, where an incorporated body like the Mercantile Library Association has selected their architect to work with them and have paid him for it.

The President: This is a thing that we all have been striving for, and I hope the resolution will be adopted.

Mr. McNamara offered the following resolution, which was adopted:

Resolved, That all matters laid down in the programme for discussion shall be presented in written papers in future.

The president announced the Committee on Uniform Measurements, under the motion of Mr. Iilsley, as follows: Geo. Carman, J. H. McNamara, C. E. Iilsley and Mr. Mitchell.

Mr. S. E. Chamberlain, of Kansas City, read a very pertinent paper, entitled "Whither Are We Drifting?" which was well received.

The following officers were elected for the new year: Messrs. T. B. Annan, of St. Louis, president; Geo. Carman, of Kansas City, vice-president; C. E. Iilsley, of St. Louis, secretary; C. K. Ramsey, of St. Louis, treasurer. Messrs. T. Furlong and James McGrath, of St. Louis, and A. Van Brunt, of Kansas City, were elected trustees.

The thanks of the convention were unanimously voted to the retiring officers; also to Prof. Halsey C. Ives, the director of the St. Louis Art Museum, for courtesies, and to Mr. Charles H. Turner for the free use of the rooms in which the convention was held.

President McGrath, on yielding his office to his newly-elected successor, thanked the members for their courtesy, patience and fidelity.

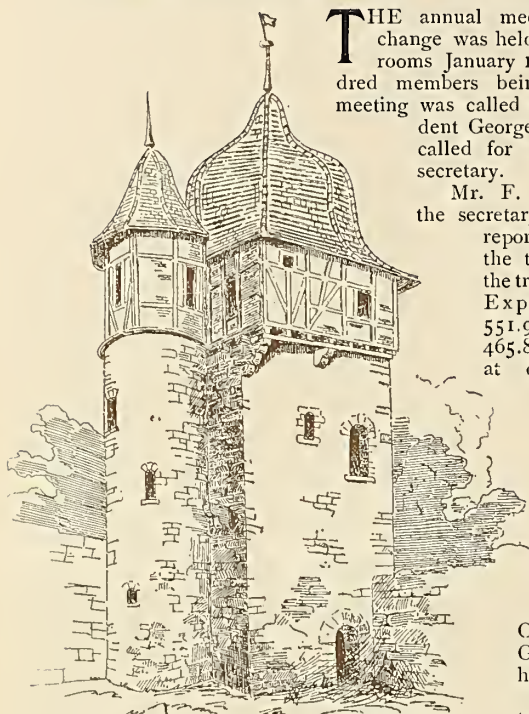
Mr. Iilsley announced recent intelligence that the architects of Kentucky were moving for the organization of a state association.

On motion of Mr. Ramsey, Kansas City was selected for the next meeting of the association.

The convention then adjourned until the second Tuesday in January, 1887. The members, after adjournment, proceeded in a body to the Mercantile Club, where they partook of a lunch provided by the St. Louis architects, and with remarks, speeches, and many interesting bits of experience, criticism and anecdote, brought to a close a most harmonious, efficient and agreeable reunion, and one which will be remembered with pleasure by every participant. Speeches were made by T. B. Annan, George I. Barnett, C. K. Ramsey, J. B. Legg, R. C. McLean, and others.

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Chicago Builders' and Traders' Exchange.



FAUST TOWER MAUBRONN
by FREDERICK KESSLER

THE annual meeting of the Exchange was held at the Exchange rooms January 17, about two hundred members being present. The meeting was called to order by President George C. Prussing, who called for the report of the secretary.

Mr. F. C. Schoenthaler, the secretary, read a detailed report which showed the total amount paid the treasurer, \$9,715.17. Expenditures, \$7,551.99; assets, \$13,465.85; balance on hand at date, \$10,187.28.

The actual membership is 498. Seven members died during the year as follows: Christian Tegtmeyer, J. G. U. Batchen, Thomas Dowling, Daniel Connell, Thomas Griffen, J. Brunkhorst, Jas. McKeon.

Joseph Downey, treasurer, reported as above, and supplemented this with the statement that he had received

\$107.00 as interest upon the money in his hands, and that he was desirous of presenting the amount to the Exchange as a nucleus for a building fund, with the hope that the Exchange would take measures toward erecting a building to serve as the home of all the building trades.

The finance committee reported the accounts of the secretary and treasurer correct.

The report of the Nominating Committee being called for, Mr. E. A. Thomas, chairman, stated that the names on the ticket were appointed as representing the different associations of builders. The head of the ticket had not been selected because he was a mason, there being no member of that trade on the committee. The report was accepted and placed on file.

The president read Article VI of the Constitution regarding delinquent members, and the secretary read twenty-six names which were canceled from the membership roll under this rule.

The meeting adjourned and the polls were declared open until five o'clock.

The Exchange reassembled at eight o'clock to conclude the annual business, President Prussing in the chair.

The president called for the reports of committees.

The report of the Library Committee was read by A. W. Murray, chairman.

The report was received and placed on file, and a vote of thanks tendered the committee, Messrs. A. W. Murray, P. B. Wight and R. C. McLean, for the able manner in which they had performed their duty.

Mr. Tapper, chairman of the Committee on Membership, reported 498 firms active members, and spoke in behalf of the committee, stating that he had been chairman of that committee ever since the Exchange's organization, that all personalities had been studiously avoided, that though it had been said that members had been admitted who should not, as the names were posted a week before being acted upon, this was the fault of the members and not the committee.

The report was accepted and filed.

The Committee on Arbitration reported some work done, and that if members would be careful and make all contracts in writing, much trouble would be avoided.

The Committee on Rooms reported that its duties had been light, but such matters as had come before it had received proper attention.

The report of the inspectors of election was read by Thomas Moulding, showing the officers for the coming year to be as follows: Total number of votes cast, 326. President, George Tapper; first vice-president, Mat. Benner; second vice president, Alexander W. Murray; secretary, F. C. Schoenthaler (re-elected); treasurer, Joseph Downey (re-elected).

For board of directors: Oliver Sollitt, Philip Henne, D. V. Purrington, James John, Murdock Campbell.

For inspectors of election for 1888: Walter T. Clark, Henry Appel and E. H. Humphrey.

There was an opposition ticket in the field, but the regular ticket was elected by a large majority, that of the secretary being 286.

Mr. Prussing called President-elect Tapper to the chair, and said that as his last official act he would declare the officers duly installed.

Mr. Thomas moved a vote of thanks to the retiring president, which was unanimously passed.

Remarks were made by Messrs. Tapper, Downey, Benner, Murray, Schoenthaler, John, and Sollitt.

The report of delegate sent to Boston to confer with the Committee of National Builders regarding the formation of a national association was called for.

Mr. Prussing, the delegate representing the Exchange, stated that he had been accompanied by W. E. Frost and William Grace of the Master Carpenters, Thomas Courtney of the Master Masons, and J. H. McCarthy of the Master Painters' Associations as delegates from their respective bodies. The speaker explained at length the transactions of the meeting at Boston, and was highly eulogistic in speaking of the reception and entertainment accorded the visitors. The other representatives followed Mr. Prussing in remarks of a similar character. Mr. Prussing stated that the platform laid down for the National Association was similar to that of the Exchange. There was a discussion as to whether the representation at the convention should be from associations of master builders or from builders' exchanges alone. The maximum number of delegates from any one city was fixed at seven, and the work of organizing exchanges left to each city, and that each city should organize. Ten cities had been suggested as places for holding the convention. There was one vote each for Boston, New York, Philadelphia, Baltimore, Washington, Cincinnati, Detroit, St. Paul and Albany (St. Louis had not been heard from), and it had finally been decided to hold the convention in Chicago, by a vote of eight to two, on March 29 next.

Mr. W. H. Sayward, the chairman, appointed a committee of five to call the convention. This consisted of George C. Prussing, Chicago; J. Milton Blair, Cincinnati; John S. Stevens, Philadelphia; Thomas J. King, Washington, and W. H. Sayward, of Boston.

The Exchange voted that the necessary advance of \$50, to defray expenses of the committee in arranging for the convention, be made.

Mr. Murray moved a vote of thanks to the delegates, which was passed.

Mr. McCarthy moved the following resolution:

WHEREAS, The preliminary conference of builders at the recent meeting held in the city of Boston, decided to hold the first annual convention of master builders in this city, and

WHEREAS, It devolves upon this Exchange, as the representative organization of the building trades, to do honor to the name of Chicago on this important occasion,

Resolved, That the Builders' and Traders' Exchange of Chicago, does hereby apply for membership in the National Builders Association, and instruct its executive officers and board of directors to take all steps necessary to insure a representation at this first convention.

Resolved, That we hereby pledge ourselves to do all in our power to make the stay of visiting delegates and the guests pleasant and agreeable during their visit to our city.

Resolved, That there be appointed by the president, a committee on "ways and means" to which we will lend all aid, personally and otherwise, which may be necessary, in its discretion, to insure the success of this first annual convention of builders.

Resolved, That said committee shall consist of fifteen members, whose chairman shall be the presiding officer of the convention appointed by the Boston conference, and that said committee is hereby instructed to proceed at once to make all necessary arrangements for the proper carrying out of the said convention, and it is hereby constituted the sole and only representative of the Exchange in relation to said convention.

The resolution was passed by a unanimous vote.

A communication from the Chicago Architectural Sketch Club was read, thanking the Exchange for the many courtesies extended by way of hall-room, etc., and on motion of Mr. Murray, the same courtesies were extended to the Sketch Club by the incoming board.

Mr. Prussing suggested, and afterward made a motion, which was in effect, that the Board of Directors be requested to investigate the advisability of the Exchange building its own home, and if it was thought advisable to report some plan of procedure.

Mr. McKenna said that he had given the matter considerable study, and sketched a plan by which the result could certainly be accomplished. This was for each of the five hundred firms in the Exchange to pay \$50 a year for five years. At this time a sufficient amount of money would have accumulated to build a first class building.

Mr. McKenna submitted the following resolution, which Mr. Prussing accepted as a substitute for his:

WHEREAS, Much has been said with reference to the members of this Exchange erecting a building of their own, therefore,

Resolved, That it is the wish of the members of the Builders' and Traders' Exchange that its board of directors be and are hereby directed to look up the law and other matters necessary in the event of the members of this Exchange erecting a building with a view to its ownership to be vested in members of the Builders' and Traders' Exchange.

Resolved, further, that the board of directors of this Exchange be requested to call a meeting of the Exchange on or before the first Saturday in April, 1887, and submit said report to the members of this Exchange.

The resolution was unanimously adopted.

Mr. Victor Falkenau submitted a resolution, calling for the institution of a course of popular lectures by the Exchange, and spoke earnestly in favor of such a movement.

Mr. Murray warmly favored the proposition, and the motion was discussed by Messrs. Thomas, Eidlitz, Moulding, and others, but the body did not think the time had come for the movement, and the motion of Mr. Falkenau was lost.

Mr. Kinsella sent a communication and resolution for members to confine their business, as far as possible, among themselves, but the motion was tabled.

Mr. Benner thought that the by-laws should be amended, and two nominating committees be appointed.

Mr. Kinsella thought the directory should be increased, so that all trades in the Exchange should be represented, and that the secretary's office should not be an elective one.

Mr. Hearson spoke in favor of a viva voce vote at elections.

Nothing was done with these propositions, and the meeting adjourned.

At a meeting of the Board of Directors, held January 22, the following gentlemen were reappointed Library Committee for the ensuing year: Messrs. A. W. Murray, P. B. Wight, R. C. McLean.

The committee appointed to suggest ways and means to erect a building for the Exchange are D. V. Purrington, E. A. Thomas and James John.

The committee of fifteen, appointed to devise ways and means to insure the success of the First National Convention of Master Builders, and to provide for the entertainment and reception of delegates, are: Geo. C. Prussing, chairman, J. B. Sullivan, Wm. E. Frost, M. W. Powell, F. S. Wright, Wm. P. Ketcham, Wm. Grace, A. W. Murray, Ed. T. Singer,

Geo. M. Moulton, E. T. Cushing, T. E. Courtney, F. V. Gindele, James John and Geo. Lill.

This committee met on January 26; eleven members present.

Mr. Prussing recapitulated his account of the Boston meeting, and read the following report of preliminary conference for the discussion of plans for the formation of a National Association of Employers in the various trades that have to do with the construction of buildings, issued by W. H. Sayward.

On the 6th of December last, the Master Builders' Association, of Boston, Mass., issued an invitation to various associations of a similar character in several of the larger cities of the country, to assemble in the city of Boston on January 10, 11 and 12, 1887, for the purpose of discussing the feasibility of forming a national association, and to take steps to secure such an organization in event of the approval of the idea.

The following associations responded favorably and named their representatives as below set forth: The Master Builders' Exchange of Albany, N. Y., represented by Mr. John Palmer; the Master Builders' Association of Baltimore, Maryland, represented by Messrs. John J. Purcell and William Ferguson; the Builders and Traders' Exchange of Chicago, Illinois, represented by Mr. George C. Prussing; the Master Carpenters' Association of Chicago, Ills., represented by Messrs. W. E. Frost and William Grace; the Master Masons and Builders' Association of Chicago, Ills., represented by Mr. Thomas E. Courtney; the Master Painters' Association of Chicago, Ills., represented by Mr. J. G. McCarthy; the Builders' Exchange of Cincinnati, Ohio, represented by Messrs. J. Milton Blair and L. H. McCammon; the Builders' Exchange of Detroit Mich., represented by Messrs. W. E. Avery, James Dean and A. Chapoton, Jr.; the Master Carpenters and Builders' Association of Detroit, Mich., represented by Messrs. Ernst Nuppenau and Henry George; the Mason Builders' Association of New York City, represented by Messrs. John J. Tucker and Marc Eidlitz; the Master Builders' Exchange of Philadelphia, Pa., represented by Messrs. John S. Stevens and Charles H. Reeves; the Contractors and Builders' Board of Trade of St. Paul, Minn., represented by Mr. E. E. Scribner; the Master Builders' Association of Washington, D. C., represented by Mr. Thomas J. King.

The representatives above mentioned assembled in Boston at the appointed time, and in conjunction with representatives from the Boston Association, discussed and adopted the following resolutions as a basis to secure a proper convention of the various industries interested in the construction and erection of buildings throughout the United States. The conference was of the opinion that it was only competent to arrange a method of bringing about a convention, and took special pains to adopt only such resolutions as properly belonged to it as a preliminary meeting, leaving decisive action to the convention proper, when convened. They hope and trust that their action will be so understood by all concerned, as set forth in the following:

The following preamble and resolutions were adopted:

WHEREAS, We, representatives of various associations of employers, in trades that have to do with the erection and construction of buildings, are assembled in conference to consider proper forms and methods for the organization of a national association, therefore, be it

1. *Resolved*, That a convention be called in the city of Chicago, on Tuesday, the 29th day of March next, for the purpose above recited.

2. *Resolved*, That the name of the proposed association should be The National Master Builders' Association of the United States of America.

3. *Resolved*, That the object of the proposed association should be understood to be the establishment of uniformity and harmony of action, upon general principles, in all matters that directly affect the interests of contractors, manual workmen, and all concerned in the erection and construction of buildings throughout the United States.

4. *Resolved*, That at this first convention the basis of representation shall be as follows, viz: Each of the various cities of the United States having a population of not less than fifty thousand (50,000) inhabitants, shall be entitled to not more than seven delegates, duly appointed by the Master Builders' Exchange, or Association, in each of the said cities, provided that the said exchange or association shall represent a membership of not less than fifty firms. The term "Master Builders' Exchange or Association," as here used, for the purposes set forth, shall be taken to mean any association, whatever its particular title, which represents, collectively, employers in the various trades that have to do with the erection and construction of buildings, provided the said association be duly and properly incorporated. In the absence of such exchange or association in any of the cities aforesaid, then the special building trades, if found legally organized as associations, shall be asked to unite in sending the seven delegates above referred to. In event of the failure in any city to secure the combined action of special trade organization, then the leading association representing a special trade, when occupying the position of master builders, may send the delegates referred to.

5. *Resolved*, That a tax of fifteen (\$15) dollars shall be paid by each association gaining representation at the said first convention, in order to defray the expenses of the preliminary conference and such expenses as may be incident to the first convention.

6. *Resolved*, That authority for the calling of the said first convention shall be and hereby is vested in a committee of five (one of whom shall be the chairman of this conference, and the others appointed by him), with full powers. That they be and hereby are authorized to receive the tax above referred to, and to expend such sums as may be necessary to meet expenses. That they be and hereby are directed to prepare a form of constitution suitable for the government of the proposed National Association, to be laid before the said first convention for action.

A true copy.

Attest: W. H. SAYWARD,
Chairman of Conference.

L. H. MCCAMMON, } Secretaries.
E. E. SCRIBNER, }

The committee for first convention, appointed under the above resolutions, will be: Messrs. Geo. C. Prussing, of Chicago; J. Milton Blair, of Cincinnati; John S. Stevens, of Philadelphia; Thos. J. King, of Washington; W. H. Sayward, of Boston.

The committee has been organized by the choice of Messrs. Geo. C. Prussing as president, J. Milton Blair as vice-president, and W. H. Sayward as secretary and treasurer.

On motion of Mr. John, the committee proceeded to organize. F. C. Schoenthaler was elected secretary, and E. T. Singer, treasurer.

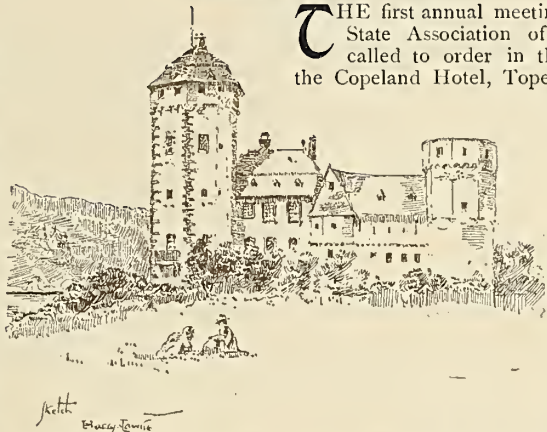
Messrs. Moulton, Cushing and John were appointed a Sub-Committee on Railroads and Hotels.

Messrs. Courtney, Frost and Gindele a Sub-Committee on Entertainment.

Messrs. Grace, Ketcham and Sullivan were appointed a Sub-Committee on Finance.

The committee will meet weekly at the same place. Next meeting February 2 at two o'clock.

Kansas State Association.



THE first annual meeting of the Kansas State Association of Architects was called to order in the club room of the Copeland Hotel, Topeka, on the 18th instant, at 10 o'clock A.M., the president, J. G. Haskell, of Topeka, in the chair.

The roll was called by Secretary H. M. Hadley, and the following members were found to be in attendance: J. G. Haskell, L.

M. Wood, C. B. Hopkins, J. C. Holland, H. M. Hadley, F. W. Cooper, of Topeka; E. T. Carr and Frank J. Grodavent, of Leavenworth; E. Dumont, of Wichita; S. A. Cook, of Winfield; A. B. Howatt, of Hutchinson; and George P. Washburn, of Ottawa.

The reading of the minutes was followed by the reports of the secretary and treasurer, which were approved.

The word "State" was, on motion, stricken out of the name of the organization, which will be hereafter known as the "Kansas Association of Architects," and a seal was ordered for immediate use. Blank certificates of membership were ordered printed.

A committee of five, consisting of Messrs. Dumont, Wood, Grodavent, Howatt and Washburn, was appointed by the chair, to prepare a code of competition and report the same at the next meeting.

A committee of five, consisting of Messrs. Wood, Holland, Dumont, Cook and Washburn was appointed to nominate officers for the ensuing year.

Messrs. Hopkins, Howatt and Grodavent were appointed a committee of three to report a plan for an increased number of meetings, and to fix the place of holding the next regular meeting. The session adjourned.

At 8 o'clock P.M. the association reassembled.

Frank Weston, of Dodge City, was elected to membership, and Messrs. Proudfoot and Bird, of Wichita, were declared to be charter members of the association.

A. B. Howatt, E. T. Carr, and George P. Washburn were appointed a committee to define terms of construction and measurement.

Messrs. Wood, Cooper and Holland were delegated to prepare a uniform system of contracts and specifications. The session adjourned.

The convention reassembled at 9 A.M., President Haskell in the chair.

A motion was adopted allowing members of other state associations to become members of this body under certain conditions.

Messrs. Gould, Hayward and Gile, of Wichita, were proposed for membership by Mr. Cook, and were eventually so elected.

An amendment to the Constitution was adopted, exempting new members from the payment of the first annual dues, upon payment of the initiation fee.

The Committee on Schedule of Prices made the following report:

That two and one-half per cent for plans, specifications and details be the established rate for store buildings and four per cent for full professional services, instead of three and one-half per cent as now set forth in schedule. Adopted.

C. B. Hopkins, chairman of the Committee on Time and Place of Meeting, reported in favor of triennial meetings of the association commencing with January and succeeded by May and September.

Mr. Dumont proposed the name of Mr. Howard, of Wichita, for admission to the association and upon favorable report from the executive committee he was duly elected.

Mr. Wood, chairman of the Committee on Legislation, moved that the bill adopted by the Western Association, of Chicago, regulating the practice of architects, be adopted by this association and a committee of five appointed to urge its passage in the present legislature. Adopted, and L. M. Wood, J. C. Holland, F. J. Grodavent, George P. Washburn and H. M. Hadley appointed as committee to look after the same.

The Committee on Nominations then submitted the following names for permanent officers of the association for the ensuing year:

President, E. T. Carr, Leavenworth; vice-president, S. A. Cook, Winfield; secretary, J. C. Holland, Topeka; treasurer, L. M. Wood, Topeka; trustees, E. Dumont, Wichita; George P. Washburn, Ottawa; A. B. Howatt, Hutchinson.

A committee of three was appointed consisting of Messrs. Wood, Holland and Cooper, to prepare a formula governing competitions on public buildings, and to order the same printed and mailed to the proper officers of the different counties throughout the state.

A vote of thanks was tendered Mr. Gordon, of the Copeland Hotel, for the use of the club room, which is especially provided and adapted in every respect for meetings of this kind; also for the kind and courteous disposition shown the members of the convention while in session.

The convention adjourned to meet on the third Tuesday in May at Wichita.

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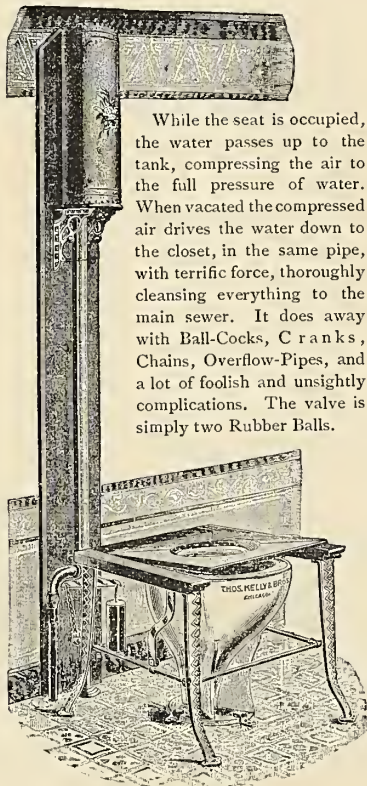
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FIG. 3.

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